AN ANALYSIS OF CASES IN FINANCIAL REPORTING

By
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A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

Oxford
May 2019

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ABSTRACT
CAROLINE COTTON: AN ANALYSIS OF CASES IN FINANCIAL REPORTING
(Under the direction of Dr. Victoria Dickinson)

This thesis includes twelve different cases of various topics in financial reporting, such as deferred income taxes, revenue recognition, marketable securities, and many others. The solutions to the cases were found in fulfillment of ACCY 420 at the University of Mississippi during the Fall of 2017 and the Spring of 2018. The thesis is formatted below so that the questions to each case are visible to the reader. When it was fitting, there are also journal entries, t-accounts, and tables to go along with the questions. Each case focuses on a different area of financial accounting with an emphasis on prevalent topics.

This thesis is created in partial fulfillment of the requirements of the Sally McDonnell Barksdale Honors College at the University of Mississippi under the direction of Dr. Victoria Dickinson in ACCY 420. The accounting Honor's College students fulfill their thesis requirement slightly different than students with other majors. Although the thesis is carried out in a classroom setting with about 50 other students, it is still an independent thesis and all of the information within the thesis is original thought.

The ACCY 420 class taught me more about the technical and hard skills for accounting than any other class I have taken during my undergraduate career. This course took the topics that we had learned about in intermediate accounting to the next level in order to further analyze that specific topic. We had the chance to actually put our accounting knowledge to work in answering the questions to these cases, just like we will

do when we enter the workforce. Therefore, this class allowed us to enhance our knowledge of financial reporting topics. We got the opportunity to connect with many different professionals during the time in this class as well.

Most of the cases included pages and pages of financial statements for different companies. I found looking at each company's financial statements to be one of the most interesting parts of each case. All of the financial statements varied in some way or another. Many of the companies would have financial statements in a different currency or line items that were stated differently than they are in the US. Each company also had very different note disclosures, depending on the type of company and what they did.

Throughout this course, we used Excel for many of the cases. This class was very beneficial to take before my accounting internship in the spring of 2019. It allowed me to freshen up on many tools in Excel while I was creating financial statements, t-accounts, journal entries, and tables. Although many of the tools in Excel that I needed in this course were basic tools, it allowed me to get quicker in locating where tools were and cutting down the time on mundane tasks.

Another way in which this course was beneficial to my undergraduate curriculum was the critical thinking approach that I was able to take in many of the twelve cases below. These cases did not include simple questions with a straight-forward answer. Many of the questions made you work backwards than you normally would have in order to find the solution or search for many different line items in the financial statements just to get to one calculated amount. Once again, this critical thinking approach was unlike the thought process of any other class during my undergraduate experience.

The knowledge that I have accumulated throughout this course will be applicable to my future career in many different ways. In fact, the course already proved to be applicable when I completed an internship this year with a big-four accounting firm. During my internship, I spent most of my time every day on working papers in Excel. This is why it is so important to know as much as you possibly can about Excel. The faster you are, the better. Therefore, any undergraduate courses in the accounting curriculum that prepare students for the workforce using Excel are beneficial courses. This course was especially beneficial due to the workload that we had each week dealing with financial reporting topics.

ACCY 420 especially prepared me for the critical thinking aspect in the accounting workforce. During my internship, I was given a couple tasks that were open ended questions left in review notes by other professionals on my engagement team. My task would simply be to answer that question and fix the problem in the working paper. I specifically remember one of the review notes that was one sentence and just simply said to review the inventory data over the past couple of years, analyze the data, come to a conclusion, and write a summary about your conclusion. This was one of the hardest tasks that I completed during my internship because it was such an open-ended question that involved critical thinking. Although I didn't see much more of this because it was only an eight-week internship, this critical thinking will be way more prevalent in a full-time job. It is important to begin practicing how to approach problems with this mind set now. I believe critical thinking will be more heavily enforced in my next year of graduate school.

Lastly, this course prepared us with the idea of a task being given to us with a due date attached to it. These cases were very time consuming with the amount of questions to answer and the amount of formatting for each case as well. This course really helped prepare many of the students with time management. This was not a course that you could wait until the night before to begin working on one of the cases below. It took multiple days to create a solid case. In the accounting workforce, we will be given many different tasks at once that all need to be completed at different times. It is important to manage your time and realize which tasks are more important than others.

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CASE 1
HOME HEATERS, INC.

Case #1 includes two companies that sell home heating units in their first year of business, 20X1. Through financial statement analysis, we are able to decide which company would be a better investment and why.

OPENING STATEMENT

After much consideration, I have decided that if I were an investor with the option of Glenwood Heating, Inc. or Eads Heaters, Inc., I would invest in Glenwood Heating, Inc. First of all, I believe Glenwood is the safer investment due to its higher income during the company's first year of operations. Also, it proves to have higher retained earnings then Eads Heaters. Although these are important things to look at when investing in a company, these two points are not the only reasons why Glenwood Heating, Inc. would be a better investment.

INCOME STATEMENT ANALYSIS

Although Glenwood Heating and Eads Heater have the same sales revenue amount, their cost of goods sold varies slightly due to the difference in inventory methods. Glenwood uses the First-In, First-out (FIFO) method while Eads uses the Last-in, First-out method (LIFO). Therefore, the inventory values and the cost of goods sold values will most likely not be the same because of the prices of the inventory purchases and which products are being pulled out of inventory (either the last items purchased or the first items purchased). Their expenses are what really change between the two income statements. Eads Heater has a bad debt expense of $4,970, which is a lot higher than Glenwood Heating's bad debt expense of $994. Glenwood has rent expense of $16,000. For Eads, instead of having a rent expense, they leased their operating equipment. I believe that leasing this equipment negatively impacted Eads, but this will be discussed more thoroughly with the balance sheet differences. The last few differences between the two income statements are with the depreciation expense on the building and the interest expense.

One more important thing to look at within the income statement is the profit margin and the net profit margin. There is not a large difference with the percentages between the two companies. Glenwood has a profit margin of 23.27 percent and a net profit margin of 55.58 percent, while Eads has a profit margin of 17.7 percent and a net profit margin of 52.62 percent. Therefore, Eads' profit margin and net profit margin are slightly lower when comparing the two companies. This supports my belief in that Glenwood be the better company to invest in.

Figure 1.1: Glenwood Heating, Inc. Income Statement

GLENWOOD HEATING, INC. Income Statement December 31, 20X1		
Sales Revenue		$ 398,500
Cost of Goods Sold		(177,000)
Gross Profit		221,500
Operating Expenses		
Bad Debt Expense	$ (994)	
Rent Expense	(16,000)	
Depreciation Expense - building	(10,000)	
Depreciation Expense - equipment	(9,000)	
Other Operating Expenses	(34,200)	
Total Operating Expenses		(70,194)
Operating Income		151,306
Non-Operating Expenses		
Interest Expense	(27,650)	
Total Non-Operating Expenses		(27,650)
Income Before Tax		123,656
Provision for Income Tax		(30,914)
Net Income		**$ 92,742**

Figure 1.2: Eads Heater, Inc. Income Statement

EADS HEATER, INC. Income Statement December 31, 20X1		
Sales Revenue		$ 398,500
Cost of Goods Sold		(188,800)
Gross Profit		209,700
Operating Expenses		
Bad Debt Expense	$ (4,970)	
Depreciation Expense - building	(10,000)	
Depreciation Expense - equipment	(20,000)	
Depreciation Expense - leased equipment	(11,500)	
Other Operating Expenses	(34,200)	
Total Operating Expenses		(80,670)
Operating Income		129,030
Non-Operating Expenses		
Interest Expense	(35,010)	
Total Non-Operating Expenses		(35,010)
Income Before Tax		94,020
Provision for Income Tax		(23,505)
Net Income		**$ 70,515**

Figure 1.3: Glenwood Heating, Inc. Statement of Retained Earnings

GLENWOOD HEATING, INC. Statement of Retained Earnings For the Year Ended December 31, 20X1		
Retained Earnings, January 1	$	-
Add: Net Income		92,742
Less: Dividends		(23,200)
Retained Earnings, December 31	**$**	**69,542**

Figure 1.4: Eads Heater, Inc. Statement of Retained Earnings

EADS HEATER, INC. Statement of Retained Earnings For the Year Ended December 31, 20X1		
Retained Earnings, January 1	$	-
Add: Net Income		70,515
Less: Dividends		(23,200)
Retained Earnings, December 31	$	47,315

BALANCE SHEET ANALYSIS

Beginning with the current assets section of the balance sheets, Glenwood has a large difference in cash compared to Eads. This is due to the rental payment on the equipment and the income tax that Glenwood paid (this can be seen in Appendix A). The final accounts receivable differences are due to the subtraction of allowance for bad debts. Lastly, the inventory differences are from the companies using different inventory methods, which affects the price of the products used (Glenwood uses FIFO and Eads uses LIFO).

Next, in the Property, Plant, and Equipment section of the balance sheet, the amounts are all the same until you get to the accumulated depreciation on the equipment. This difference is due to the double-declining balance (DDB) to record the depreciation expense. Glenwood uses straight-line depreciation for both the building and delivery equipment. Eads also uses straight-line depreciation for the building, just not the delivery equipment. Lastly, here we can see how the leased equipment affects Eads. Eads has a higher amount in total assets due to the leased equipment. Glenwood simply expensed the rent rather than putting this lease into their assets.

Moving down into the liabilities and stockholders' equity section of the balance sheet, the first difference we see is in current liabilities with Eads having a lease payable and Glenwood does not. Another thing to point out in this section is the current portion of the note payable and not the entire note payable. This is not the full amount of the note payable because current liabilities are due within a year or the end of the current period. Therefore, only the first year's portion is within the current section.

In long-term debt or liabilities section, the only account for both companies is the rest of the long-term note payable to be paid in later years but not the current year.

Lastly, in the stockholders' Equity section of the balance sheet, the only difference is the retained earnings. The ending retained earnings is calculated in the statement of retained earnings above.

As I did for the income statement, I also calculated a couple ratios for the balance sheet information. The first one I wanted to look at is the current ratio. This one is important because it involves current assets and current liabilities, so it is what is happening within a one-year period. Therefore, this ratio calculates how a company can pay its current liabilities. Glenwood has a current ratio of 3.04 and Eads has a current ratio of 1.12. With current ratio, the higher the number is, the better. Glenwood has a very good current ratio, which proves the liquidity of the company.

Another thing to look at within the balance sheet is the debt to assets ratio, which compares total debt to total assets. With this ratio, you want the amount to be as low as possible, meaning the company is at low risk. The debt-to-assets ratio for both companies is considerably high. For Glenwood, the debt ratio is 64.28 percent and for Eads it is 70.54 percent. Typically, you want these numbers under 50 percent.

Figure 1.5: Glenwood Heating, Inc. Balance Sheet

GLENWOOD HEATING, INC.			
Balance Sheet			
December 31, 20X1			
Assets			
Current Assets			
Cash		$ 426	
Accounts Receivable	$ 99,400		
Less: Allowance for Bad Debts	(994)	98,406	
Inventory		62,800	
Total Current Assets			$ 161,632
Property, Plant, and Equipment			
Land		70,000	
Building	350,000		
Less: Accumulated Depreciation-building	(10,000)	340,000	
Equipment	80,000		
Less: Accumulated Depreciation-equip.	(9,000)	71,000	
Total Property, Plant, and Equipment			481,000
Total Assets			**$ 642,632**
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 26,440		
Interest Payable	6,650		
Current Portion Note Payable	20,000		
Total Current Liabilities			$ 53,090
Long-term Debt			
Long-term Note Payable	360,000		
Total Long-term Debt			360,000
Total Liabilities			413,090
Stockholders' Equity			
Common Stock		$ 160,000	
Retained Earnings		69,542	
Total Stockholders' Equity			$ 229,542
Total Liabilities and Stockholders' Equity			**$ 642,632**

Figure 1.6: Eads Heater, Inc. Balance Sheet

EADS HEATER, INC.			
Balance Sheet			
December 31, 20X1			
Assets			
Current Assets			
Cash		$ 7,835	
Accounts Receivable	$ 99,400		
Less: Allowance for Bad Debts	(4,970)	94,430	
Inventory		51,000	
Total Current Assets			$ 153,265
Property, Plant, and Equipment			
Land		70,000	
Building	350,000		
Less: Accumulated Depreciation - Building	(10,000)	340,000	
Equipment	80,000		
Less: Accumulated Depreciation - Equipment	(20,000)	60,000	
Leased Equipment	92,000		
Less: Accumulated Depreciation - Leased Equipment	(11,500)	80,500	
Total Property, Plant, and Equipment			$ 550,500
Total Assets			**$ 703,765**
Liabilities and Stockholders' Equity			
Current Liabilities			
Accounts Payable	$ 26,440		
Interest Payable	6,650		
Current Portion Note Payable	20,000		
Lease Payable	83,360		
Total Current Liabilities			$ 136,450
Long-term Debt			
Long-term Note Payable	360,000		
Total Long-term Debt			360,000
Total Liabilities			496,450
Stockholders' Equity			
Common Stock		$ 160,000	
Retained Earnings		47,315	
Total Stockholders' Equity			$ 207,315
Total Liabilities and Stockholders' Equity			**$ 703,765**

CONCLUSION

This first case proved why financial statements are important, especially when comparing two different companies or one company over multiple years. At first glance, many amounts are easily misconceived. It is finding ratios and percentages of profitability, solvency, and liquidity that help an investor make credible decisions about whether or not to invest in a company. After much consideration and analysis, these financial statements proved that Glenwood Heating, Inc. would be a better company to invest in.

CASE 2
MOLSON COORS BREWING COMPANY – PROFITABILITY AND EARNINGS PERSISTENCE

Case #2 involves two companies that have just merged together called Adolph Coors Company and Molson Inc. to form Molson Coors Brewing Company. This case involves profitability and earnings persistence within financial statements.

OPENING STATEMENT

The second case analyzes Molson Coors Brewing Company's financial statements, specifically its profitability and earnings persistence. Therefore, investors want to look closer at which transactions are reoccurring and which transactions are not going to affect the company in the future. It is important to see which expense accounts are part of the company's main operations that show up every period on the financial statements. It is also important to see that the company has persistent income, meaning the company has a steady inflow of net income in consecutive periods. This helps investors see how a company has done over time and also is a way to predict future performance.

CONCEPTUAL QUESTIONS

a.) **What are the major classifications on an income statement?**

There are 6 main classifications that are commonly used in an income statement:

1. Operating Section: reports sales/revenue, cost of goods sold, selling expenses, and administrative/general expenses
2. Non-operating Section: reports other revenues and expenses from secondary activities
3. Income Tax: reports federal and state taxes levied on income
4. Discontinued Operations: reports gains or losses from the disposition of a component of the business
5. Non-controlling Interest: reports allocation of income to non-controlling shareholders
6. Earnings Per Share: reports performance over a reporting period

b.) **Explain why, under U.S. GAAP, companies are required to provide "classified" income statements.**

Under U.S. GAAP, it is very important for companies to provide "classified" income statements. One reason is to simply prevent fraudulent activity on the income statements. Another reason is to compute net income from the revenues and expenses that should be listed on the income statement. This allows investors to see what section each revenue and expense are falling under and whether they are reoccurring or unusual. This can also help investors predict what will happen in the future. This will be the deciding factor for

the investor of whether they will invest in the company or not. Lastly, having the classifications in this order allows investors to more easily compare the differences between multiple companies.

A classified income statement provides information on revenues and expenses within the main operations of the company in order to calculate net income. Net income allows users to make better decisions based on how that number varies from period to period. If net income is increasing, this gives users an insight that the company is doing successful and improving their main operations.

c.) **In general, why might financial statement users be interested in a measure of persistent income?**

Users of financial statements include owners, investors, creditors, and lenders. Financial statement users may be interested in a measure of persistent income when reviewing income statements over multiple periods. It is a good way to see how companies have done over time and also a good measure to predict future performance. Financial statement users are looking for consistency over periods. The users benefit because they can make the best investment after comparing multiple companies' financial statements and therefore, receive the best outcome.

d.) **Define comprehensive income and discuss how it differs from net income.**

Comprehensive income includes all of the changes in equity during a period except for investments by owners and distributions to owners. Therefore, comprehensive income includes net income in addition to other gains and losses that affect stockholders' equity.

PROCESS QUESTIONS

e.) **The income statement reports "Sales" and "Net Sales." What is the difference? Why does Molson Coors report these two items separately?**

Sales includes the money brought in just from selling goods or services, without any deductions. Net sales can include a separate sales revenue account and deductions like sales discounts, sales returns and allowances, and like in this case, excise taxes. After adding and subtracting these accounts, net sales can be computed. The excise tax account is deducted here because excise taxes are not charged to the customer but instead included within the price of the good or service. Therefore, to reach the amount of net sales, excise taxes must be deducted.

f.) **Consider the income statement item "Special items, net" and information in Notes 1 and 8.**

1. In general, what types of items does Molson Coors include in this line item?

Within the note of special items, it contains many items that accountants generally ignore. Special items are not expected to be recorded in future years ant they are not recorded within revenue or expense accounts on the income statement. In this case, the special items include: infrequent or unusual items, impairment or asset abandonment-related losses, restructuring charges and other atypical employee-related costs, and fees on termination of significant operating agreements and gains (losses) on disposal of investments.

2. **Explain why the company reports these on a separate line item rather than including them with another expense item. Molson Coors classifies these special items as operating expenses. Do you concur with this classification? Explain.**

The company reports these on a separate line item rather than including them with another expense item because they are not part of the company's main operations. They should be recorded separately to show that they are not expected to be recorded in the future years.

g.) **Consider the income statement item "Other income (expense), net" and the information in Note 6. What is the distinction between "Other income (expense), net" which is classified a non-operating expense, and "Special items, net" which Molson Coors classifies as operating expenses?**

The difference between "Other income (expense), net" and "Special items, net" is that "Special Items, net" are not expected to be reoccurring in the future. "Other income (expense), net" are expenses that are expected to be reoccurring in the future. The "Other income (expense), net" accounts in note 6 include: gain on sale of non-operating assets, bridge facility fees, euro currency purchase loss, gain from Foster's swap and related financial instruments, gain (loss) from other foreign exchange and derivative activity, loss related to the change in designation of cross currency swaps, and other, net. Special items are more difficult to trace to operations while other income expenses can be more easily traced to the company's operations.

h.) **Refer to the statement of comprehensive income.**

1. What is the amount of comprehensive income in 2013? How does this amount compare to net income in 2013?

The comprehensive income (loss) attributable to Molson Coors Brewing Company is $760.2 million. The comprehensive income is computed from the net income in addition to gains and losses that affect stockholders' equity. The net income before comprehensive income is computed is $572.5 million. Therefore, the comprehensive income is significantly higher than the net income.

2. **What accounts for the difference between net income and comprehensive income in 2013? In your own words, how are the items included in Molson Coors' comprehensive income related?**

The difference between net income and comprehensive income in 2013 is that comprehensive income contains net income plus or minus any gains or losses that bypassed net income before and are non-owner sources. The items included in Molson Coors' comprehensive income are all related because they are not primary operations of the company but must be included in comprehensive income.

j.) **Consider the information on income taxes, in Note 7.**

1. What is Molson Coors' effective tax rate in 2013?

Molson Coors' effective tax rate in 2013 is 12.8 percent, which is stated in Note 7. The effective tax rate is calculated by income tax expense divided by pretax income.

CONCLUSION

This second case proved how important financial statements are for investors. Specifically, it is very important that income statements remain "classified" meaning that different accounts are under the section that they belong in. The classifications of an income statement that were discussed above are: operating section, non-operating section, income tax, discontinued operations, non-controlling interest, and earnings per share. It is necessary to list the income statement accounts in this order to compute net income from revenue and expense accounts and allow investors to see where the amounts are coming from in normal operations of the company.

Another important topic of this case was using the income statement to calculate persistent income. This is another thing that investors are looking for within companies. They want to be able to compare net income over multiple periods and also be able to compute future performance. Investors are looking for net income to be increasing over periods and not decreasing.

CASE 3
PEARSON PLC – ACCOUNTS RECEIVABLE

Case #3 involves an international company called Pearson plc with their headquarters in London, England. The objective of this case is to learn about accounts receivable including the terminology and how to calculate and analyze different accounts using t-table and journal entries.

OPENING STATEMENT

The third case analyzes Pearson plc Company's financial statements, but in particular it looks at accounts receivable. An account receivable is an oral promise to pay back money that is owed from the purchase of a good or service. In this case, their headquarters is in London, England, which means that some of the terminology in the financial statements varies slightly than the terminology in the United States. For example, in the UK they use "provision" rather than "allowance". The two contra accounts that are focused on the most are the provision for doubtful debts and the provision for sales returns. The different methods for estimating these accounts are discussed below. The amounts throughout this case were taken from the financial statements, which are in millions of dollars.

CONCEPTUAL QUESTIONS

a.) **What is an account receivable? What other names does this asset go by?**

Accounts receivable are oral promises from the purchaser of money that is owed from the purchase of goods or services. This asset also goes by trade receivables. Trade receivables are generally the most significant item that the company possesses, which is then classified as either an account receivable or a note receivable.

b.) **How do accounts receivable differ from notes receivable?**

Accounts receivable are oral promises that the purchaser will pay the company the money that is owed from the purchase at a later date. Accounts receivable are generally collected within a month or two because they are simply extensions of credit. On the other side, notes receivable are written promises to pay an amount of money at a future date. These are from transactions like sales or financing and can be either short term or long term. Lastly, notes receivable are often interest-bearing, whereas accounts receivable are not.

c.) **What is a contra account? What two contra accounts are associated with Pearson's trade receivables (see Note 22)? What types of activities are captured in each of these contra accounts? Describe factors that managers might consider when deciding how to estimate the balance in each of these contra accounts.**

A contra account is a general ledger account that has the opposite balance of its normal balance. The two contra accounts that are associated with Pearson's trade receivables are provision for bad and doubtful debts and provision for sales returns. In the US, these

accounts would be called allowance for doubtful accounts and allowance for sales returns and allowances. The provision for bad and doubtful debts account is when the customers do not pay the money that is owed to the company from the purchase of goods and services. It is estimated at the end of each period. The provision for sales returns account is an estimate of the amount of goods that will be returned to the company within the period. When financial statements are created, companies estimate for these accounts and the net realizable value using information from past financial statements and predictions for the future.

d.) **Two commonly used approaches for estimating uncollectible accounts receivable are the percentage-of-sales and the aging-of-accounts procedure. Briefly describe these two approaches. What information do managers need to determine the activity and final account balance under each approach? Which of the two approaches do you think results in a more accurate estimate of net accounts receivable?**

Percentage-of-sales procedure is when a percentage is calculated based on performance in the past and predictions in the future. This percentage is then multiplied times the amount of credit sales to find an estimate of uncollectible accounts receivable. Aging-of-accounts procedure is more of a report that lists the customers that have not paid by different ranges of dates. The ranges typically include: 30 days old or less, 31-60 days, 61-90 days, and then all of the older invoices. This report is useful because you can look at historical percentages of uncollectible accounts.

For the percentage-of-sales procedure, managers need to know the total amount of sales and also the percentage that is going to be used has to be calculated. For the aging-of-

accounts procedure managers need to know the age of all of the uncollected accounts receivable and then calculate percentages for each of these periods of time.

I believe that aging-of-accounts receivable is the best approach because it provides a table with more information on the dates and the percentages at each of those time periods. Therefore, it gives more information than just a single percentage that is used in the percentage-of-sales procedure.

e.) **If Pearson anticipates that some accounts will be uncollectible, why did the company extend credit to those customers in the first place? Discuss the risks that managers must consider with respect to accounts receivable.**

Pearson knows that there will be a certain amount of money that will be uncollectible, they just do not know which accounts these exactly will be. Therefore, they have to extend credit to every customer in hope that the money will be received in the future. If they simply reject a company, that creates bad relations and bad reviews for the company. This is the risk that all companies have to take.

PROCESS QUESTIONS

f.) **Note 22 reports the balance in Pearson's provision for bad and doubtful debts (for trade receivables) and reports the account activity ("movements") during the year ended December 31, 2009. Note that Pearson refers to the trade receivables contra account as a "provision." Under U.S. GAAP, the receivables contra account is typically referred to as an "allowance" while the term provision is used to describe the current-period income statement charge for uncollectible accounts (also known as bad debt expense).**

1. **Use the information in Note 22 to complete a T-account that shows the activity in the provision for bad and doubtful debts account during the year. Explain, in your own words, the line items that reconcile the change in account during 2009.**

Provision for Bad and Doubtful Debts	
	72
5	
	26
20	
	3
	76

In note 22, we can see the movements on the provision for bad and doubtful debts that appear on the t-account above. The beginning of the year balance is £72 million. The other two credit balances for this account are the income statement movements with a balance of £26 million and the acquisition through business

combination with a balance of £3 million. The debits that are listed above on the t-account are the exchange differences of £5 million and the utilized amount of £20 million. Finally, the ending balance is £76 million.

2. **Prepare the journal entries that Pearson recorded during 2009 to capture 1) bad and doubtful debts expense for 2009 (that is, the "income statement movements") and 2) the write-off accounts receivable (that is, the amount "utilized") during 2009. For each account in your journal entries, note whether the account is a balance sheet or income statement account.**

Provision for Bad and Doubtful Debts	5	
Gain on Exchange Differences		5
Bad and Doubtful Debts Expense	26	
Provision for Bad and Doubtful Debts		26
Provision for Bad and Doubtful Debts	20	
Trade Receivables		20
Loss: Acquisition through Business Combinati	3	
Provision for Bad and Doubtful Debts		3

Income statements accounts include: Bad and Doubtful Debts Expense, Gain on Exchange Differences, and the Loss on Acquisition through Business Combination. Balance sheet accounts include: Provision for Bad and Doubtful Debts and Trade Receivables. The income statement and balance sheet account amounts above are in millions.

3. **Where in the income statement is the provision for bad and doubtful debts expense included?**

The provision for Bad and Doubtful debts expense total of £76 million is listed under the operating expenses of the balance sheet.

g.) **Note 22 reports that the balance in Pearson's provision for sales returns was £372 million. In reconciling the change in the account, two types of journal entries are required, one to record the estimated sales returns for the period and one to record the amount of actual book returns.**

1. **Complete a T-account that shows the activity in the provision for sales returns account during the year. Assume that Pearson estimated that returns relating to 2009 Sales to be £425 million. In reconciling the change in the account, two types of journal entries are required, one to record the estimated sales returns for the period and one to record the amount of actual book returns.**

Provision for Sales Returns	
	372
	425
443	
	354

2. **Prepare the journal entries that Pearson recorded during 2009 to capture, 1) the 2009 estimated sales returns and 2) the amount of actual book returns during 2009. In your answer, note whether each account in the journal entries is a balance sheet or income statement account.**

Sales Returns and Allowances	425	
Provision for Sales Returns		425
Provision for Sales Returns	443	
Trade Receivables		443

Provision for Sales Returns and Trade Receivables are balance sheet accounts. Sales Returns and Allowances is an income statement account. The amounts in the journal entry are in millions.

3. **In which income statement line item does the amount of 2009 estimated sales returns appear?**

Similar to the Provision for Bad and Doubtful Debts Expense, the Provision for Sales Returns also would appear in the operating section of the income statement. Estimated sales returns are deducted from gross sales to arrive at net sales.

h.) **Create a T-account for total or *gross* trade receivables (that is, trade receivables before deducting the provision for bad and doubtful debts and the provision for sales returns). Analyze the change in this T-account between December 31, 2008 and 2009. (*Hint:* your solution to parts *f* and *g* will be useful here). Assume that sales in 2009 were on account. That is, they are all "credit sales." You may also assume that there were no changes to the account due to business combinations or foreign exchange rate changes. Prepare the journal entries to record the sales on account and accounts receivable collection activity in this account during the year.**

Trade Receivable (gross)	
1,474	
	20
5,624	
	443
	5,216
1,419	

Trade Receivables	5,624	
Sales Revenue		5,624
Cash	5,216	
Trade Receivables		5,216

In the t-account above for trade receivables, gross, the beginning debit number can be found in note 22 under total trade receivables for 2008, which is £1,474 million. The first credit amount of £20 is the amount to cover the debts that were uncollected during the fiscal year. The next debit of £5,624 can be found under sales for 2009 in the consolidated income statement for the year ended December 21, 2009. The next credit of £443 is the amount of sales returns during the year. The last debit in the ending balance of £1,419 is the 2009 value for the ending total trade receivables. After the debit values are plugged into the t-account, the credit of £5,679 can be calculated, which is the sales that were made on account.

CONCLUSION

Within the steps above, the provision for bad and doubtful debts and the provision for sales returns were calculated with the use of t-accounts and journal entries. T-accounts are helpful in finding different balances, especially when there are many steps to follow. This case proved how important a good estimate for an allowance/provision is. Every company is going to have some number of receivables that are uncollectible. This number will vary for every company and will vary for each company per year. Looking back on past receivables that were uncollectible is important to see the trends over the years. A company might even have reoccurring customers that are not paying for multiple periods. A company cannot simply turn away a customer just because they think they are not going to pay them back in the future. This is why an estimate is produced each period to try to match the amount of actual accounts that are uncollectible. Every company has risks, but they would not be a company if they did not take them.

CASE 4
INTERMEDIATE ACCOUNTING PROBLEM

Case #4 was different from that traditional cases that we did in ACCY 420. For this case, each student chose a problem in the textbook to present their findings on. We did this in preparation for our Intermediate Accounting test the week of this case.

INTRODUCTION

The objective of this case is to better understand a problem of our choice within the intermediate textbook. For this case, I chose problem 7-2 which has to do with reporting bad debt. I chose this problem because I struggle with finding the estimate of the uncollectibles. This problem includes 5 separate parts that are independent of each other to explore the multiple ways to report bad debt.

PROBLEM 7-2 (BAD-DEBT REPORTING)

The following are a series of unrelated situations:

1. Halen Company's unadjusted trial balance at December 31, 2017, disclosed the following.

Accounts Receivable (debit): $53,000

Allowance for Doubtful Accounts (debit): $4,000

Net Sales (credit): $1,200,000

Halen Company estimates its bad debt expense to be 7% of gross accounts receivable. Determine its bad debt expense for 2017.

The first step to this problem is to multiply the accounts receivable amount of $53,000 times the estimated percentage of 7 percent. This comes out to be $3,710. The next step is to create a t-account to correctly find the bad debt expense amount for 2017. In order to set up the t-account, the $3,710 becomes the ending balance of allowance for doubtful accounts, the allowance for doubtful accounts amount of $4,000 has a debit balance so it will go on the left side of the t-account. With these two amounts in the t-account, we find that the bad debt expense amount is a credit balance of $7,710.

2. An analysis and aging of Stuart Corp. accounts receivable at December 31, 2017, disclosed the following.

Amount estimated to be uncollectible: $180,000

Accounts Receivable: $1,750,000

Allowance for Doubtful Accounts (per books): $125,000

What is the net realizable value of Stuart's receivables at December 31, 2017?

This is a very simple problem since it is just asking for the net realizable value. To find this amount, you take the accounts receivable amount of $1,750,000 minus the amount estimated to be uncollectible of $180,000 and the net realizable value is $1,570,000.

3. At the end of the first year of operations, December 31, 2017, Darden Inc. reported the following information.

Accounts receivable, net of allowance for doubtful accounts: $950,000

Customer accounts written off as uncollectible during 2017: $24,000

Bad debt expense for 2017: $84,000

What should be the balance in accounts receivable at December 31, 2017, before subtracting the allowance for doubtful accounts?

For this problem, you would begin with the bad debt expense for 2017 balance of $84,000, then subtract the customer accounts written off as uncollectible during 2017 balance of $24,000 to get an amount of $60,000, which is the allowance for doubtful accounts. In order to get the balance of accounts receivable before subtracting allowance for doubtful accounts, you have to add the allowance for doubtful accounts balance of $60,000 (solved above) to the accounts receivable balance of $950,000 to get a final balance of $1,010,000, which is the accounts receivable balance before the allowance for doubtful accounts was subtracted.

5. The following accounts were taken from Bullock Inc.'s trial balance at December 31, 2017.

Net credit sales (credit): $750,000

Allowance for doubtful accounts (debit): $14,000

Accounts receivable (debit): $310,000

If doubtful accounts are 3% of accounts receivable, determine the bad debt expense to be reported for 2017.

This last step is very similar to the first one. The first step is to multiply the accounts receivable balance of $310,000 times 3 percent to get a balance of $9,300. Then, create a t-account of allowance for doubtful accounts with $9,300 as the ending balance. The allowance for doubtful accounts balance has a credit balance. After these two amounts are in the t-account, you can find the bad debt expense amount of $23,300.

CONCLUSION

This case was different from the standard cases that we perform in ACCY 420. We got to choose a problem in the Intermediate Accounting textbook of our choice and present the answer in our thesis. The goal of this case was to help prepare us for our midterm exam. This problem allowed me to get a better understanding of estimating uncollectibles and finding bad debt expense. I really liked the variety of the problems from different angles because this will better prepare me for the exam.

CASE 5
PALFINGER AG – PROPERTY, PLANT, AND EQUIPMENT

Case #5 includes a manufacturing company that is based in Bergheim, Austria. The company manufactures hydraulic lifting, loading, and handling solutions worldwide. Through financial statement analysis, we can look closer at not only the assets, but also the depreciation on those assets.

OPENING STATEMENT

The fifth case analyzes Palfinger AG Company's financial statements, but in particular this case focuses on property, plant, and equipment. Property, plant, and equipment are assets of a durable nature that are used in operations and not for resale, long-term in nature and usually depreciated, and possess physical substance. Examples of property, plant, and equipment are land, building structures (offices, factories, warehouses), and equipment (machinery, furniture, tools). This case on how certain costs are capitalized, computing depreciation through the two different methods, and calculating gains/losses on fixed-asset disposals. In the conceptual and process questions below, these ideas will be further discussed and evaluated.

CONCEPTUAL QUESTIONS

a) **Based on the description of Palfinger above, what sort of property and equipment do you think the company has?**

I think that Palfinger would have property and equipment consisting of heavy machinery, factories, warehouses, transportation equipment, office equipment, manufacturing equipment, and a lot of land due to the size of the equipment this company is producing.

b) **The 2007 balance sheet shows property, plant, and equipment of €149,990. What does this number represent?**

Property, plant, and equipment are assets of a durable nature. They are also called plant assets and fixed assets. A couple qualities of property, plant, and equipment include: they are used in operations and not for resale, they are long-term in nature and usually depreciated, and they possess physical substance. Types of property, plant, and equipment include: land, building structures (i.e. offices, factories, warehouses), and equipment (machinery, furniture, tools).

c) **What types of equipment does Palfinger report in notes to the financial statements?**

In the notes to the financial statements, Palfinger lists: own buildings and investments in third-party buildings; plant and machinery; fixtures, fittings, and equipment. In addition, they also list the typical lives of these types of equipment. Own buildings and

investments in third-party buildings has a typical life of 8-50 years, plant and machinery have 3-15 years, and fixtures, fittings, and equipment have 3-10 years.

d) **In the notes, Palfinger reports "Prepayments and assets under construction." What does this sub-account represent? Why does this account have no accumulated depreciation? Explain the reclassification of €14,958 in this account during 2007.**

In Austria, the account "prepayments and assets under construction" are known in the United States as "self-constructed assets". The costs include: materials/direct labor and overhead. The overhead can be handled in two ways: 1) assign no fixed overhead, or 2) assign a portion of all overhead to the construction process (more commonly used). Self-constructed assets do not depreciate because they are not in use yet. The buildings are still in progress and not yet available for use. Once they are in use, they will begin depreciating over the years and listed under property, plant, and equipment.

e) **How does Palfinger depreciate its property and equipment? Does this policy seem reasonable? Explain the trade-offs management makes in choosing a depreciation policy.**

Palfinger depreciates its property and equipment as soon as they are put into operation. This does not seem reasonable. Depreciation should be recorded at the end of each period and not immediately when put into use. The trade-offs management makes in choosing a depreciation policy are whether or not the asset will be used an equal amount each period, whether or not the asset generates a level of output each period that can be measured, and

whether or not the asset will be used more at the beginning or end of its life rather than equally.

f) **Palfinger routinely opts to perform major renovations and value-enhancing modifications to equipment and buildings rather than buy new assets. How does Palfinger treat these expenditures? What is the alternative accounting treatment?** Palfinger capitalizes and depreciates these expenditures over either the new or the original useful life. The approaches that have been suggested to account for the interest incurred in financing the construction are: capitalize no interest during construction, capitalize actual costs incurred during construction, or capitalize all costs of funds. The second one listed is accepted by GAAP.

The capitalization period begins when expenditures for the asset have been made, activities for readying the asset are in progress, and interest costs are being incurred. This period ends when the asset is substantially complete and ready for use.

g) **Use the information in the financial statement notes to analyze the activity in the "Property, plant, and equipment" and "Accumulated depreciation and impairment" accounts for 2007. Determine the following amounts:**

Activity in PPE Account	Amount
1. The purchase of new property, plant, and equipment in fiscal 2007	€ 61,444
2. Government grants for purchases of new property, plant, and equipment in 2007. Explain what these grants are and why they are deducted from the property, plant, and equipment account.	€733 These government grants are presented as reductions of the acquisition and/or manufacturing costs. In this case, they are related to assets in which there is an option of either deferring income or deducting from PPE.
3. Depreciation expense for fiscal 2007.	€ 12,557
4. The net book value of property, plant, and equipment that Palfinger disposed of in fiscal 2007.	€13,799 - €12,298 = €1,501

h) The statement of cash flows (not presented) reports that Palfinger received proceeds on the sale of property, plant, and equipment amounting to €1,655 in fiscal 2007. Calculate the gain or loss that Palfinger incurred on this transaction. Hint: use the net book value you calculated in part g iv, above. Explain what this gain or loss represents in economic terms.

The net book value of property, plant, and equipment that I calculated above is €13,799-€12,298=€1,501. If Palfinger received proceeds on the sale of property, plant, and

equipment of €1,655, then the gain on the transaction would be €154. This is a gain because the sale is greater than the book value. Therefore, this gain means that the value of the property, plant, and equipment has increased.

i) Consider the €10,673 added to "Other plant, fixtures, fittings, and equipment" during fiscal 2007. Assume that these net assets have an expected useful life of five years and a salvage value of €1,273. Prepare a table showing the depreciation expense and net book value of this equipment over its expected life assuming that Palfinger recorded a full year of depreciation in 2007 and the company uses:

1) Straight-Line Depreciation:

Figure 5.1: Palfinger AG Straight-Line Depreciation

Year	Beginning Book Value	Straight-Line Depreciation Amount	Ending Accumulated Depreciation	Ending Book Value
2007	€ 10,673	€ 1,880	€ 1,880	€ 8,793
2008	8,793	1,880	3,760	6,913
2009	6,913	1,880	5,640	5,033
2010	5,033	1,880	7,520	3,153
2011	3,153	1,880	9,400	1,273

Straight-Line Depreciation Amount: (€10,673 - €1,273) / 5 = €1,880

2) Double-Declining-Balance Depreciation:

Figure 5.2: Palfinger AG Double-Declining Balance Depreciation

Year	Beginning Book Value	Depreciation Rate	Straight-Line Depreciation Amount	Ending Accumulated Depreciation	Ending Book Value
2007	€ 10,673	40%	€ 4,269	€ 4,269	€ 6,404
2008	6,404	40%	2,562	6,831	3,842
2009	3,842	40%	1,537	8,368	2,305
2010	2,305	40%	922	9,290	1,383
2011	1,383	40%	110	9,400	1,273

j) Assume that the equipment from part i. was sold on the first day of fiscal 2008 for proceeds of €7,500. Assume that Palfinger's accounting policy is to take no depreciation in the year of sale.

1) Calculate any gain or loss on this transaction assuming that the company used straight-line depreciation. What is the total income statement impact of the equipment for the two years that Palfinger owned it? Consider the gain or loss on disposal as well as the total depreciation recorded on the equipment.

1/1/08	Cash	7,500	
	Loss on Sale of Equipment	1,293	
	Equipment		8,793

The total income statement impact of the equipment for the two years that Palfinger owned it would be a decrease in net income in the operating section of the income statement. Palfinger sold the equipment for less than the book value, which affects net income and not cash. This loss can be calculated from the

straight-line depreciation table above. The beginning book value on the equipment is €8,793, which is higher than the selling price of €7,500.

2) **Calculate any gain or loss on this transaction assuming the company used double-declining balance depreciation. What is the total income statement impact of this equipment for the two years that Palfinger owned them? Consider the gain or loss as well as the total depreciation recorded on the equipment.**

1/1/08	Cash	7,500	
	Equipment		6,404
	Gain on Sale of Equipment		1,096

The total income statement impact of the equipment for the two years that Palfinger owned it would be an increase in net income in the operating section of the income statement. Palfinger sold the equipment for more than the book value, which affects the net income also. This gain can be calculated from the double-declining balance depreciation table above. The beginning book value of the equipment is €6,404, which is less than the selling price of €7,500.

3) **Compare the total two-year income statement impact of the equipment under the two depreciation policies. Comment on the difference.**

As stated above, straight-line depreciation creates a loss on the sale and double-declining balance depreciation creates a gain on the sale. Therefore, straight-line depreciation decreases net income and double-declining balance depreciation increases net income. This is because there is much more of a depreciation

expense in the first year with double-declining than there is with straight-line. Therefore, the beginning book value of straight-line is higher than it is with double-declining. This is where the gain/loss comes from when selling the equipment for the same price in the first year.

CONCLUSION

Property, plant, and equipment are also called plant assets and fixed assets. As seen above, PPE is long-term in nature and usually depreciated. The two types of depreciation calculated in the tables above are straight-line depreciation and double-declining-balance depreciation. Specifically, equipment includes all expenditures incurred in acquiring the equipment and preparing it for use. The costs include: purchase price, freight and handling charges, insurance on the equipment while in transit, cost of special foundations if required, assembling and installation costs, and costs of conducting trial runs.

We also saw in the notes, Palfinger has an account called “prepayments and assets under construction”. This account is other known as “self-constructed assets” in the US. The costs for this account include: materials and direct labor and also overhead. The overhead can be handled in two different ways: it can be assigned to fixed overhead or it can assign a portion of all overhead to the construction process (more commonly used). Property, plant, and equipment can be difficult to valuate because of its nature but it is also an extremely important asset account for different companies.

CASE 6
VOLVO GROUP – RESEARCH AND DEVELOPMENT COSTS

Case #6 involves a company that supplies commercial vehicles like trucks, buses, construction equipment, engines and drive systems, and lastly, aircraft engine components. Volvo Group's headquarters is in Torslanda, Sweden. Within this case, we look closer at the costs that are included in research and development (R&D) expenditures.

OPENING STATEMENT

The sixth case specifically focuses on Volvo Group's Research and Development Costs within the financial statements. Research activities include planned search or critical investigation aimed at discovery of new knowledge. Development activities include translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process whether intended for sale or use.

This case compares and evaluates alternative accounting treatments for research and development. It also allows for a better understanding of how to capitalize product development costs and how they affect the balance sheet, the income statement, and the statement of cash flows. Lastly, the case allows for adjustments of financial statement amounts to compare US and international methods of research and development accounting.

CONCEPTUAL QUESTIONS

a) The 2009 income statement shows research and development expenses of SEK 13,193 (millions of Swedish Krona). What types of costs are likely included in these amounts?

The costs that are likely included in these amounts are materials, equipment, facilities, salaries/wages, service costs, operating costs, advertising costs, and more. Planned search or critical investigation aimed at discovery of new knowledge are research activities. Translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process whether intended for sale or use are development activities. In general, all research and development costs are to be charged to expense when incurred.

b) Volvo Group follows IAS 38 – *Intangible Assets*, to account for its research and development expenditures (see IAS 38 excerpts at the end of this case). As such, the company capitalizes certain R&D costs and expenses others. What factors does Volvo Group consider as it decides which R&D costs to capitalize and which to expense?

For research and development, expenses are not matched to revenues. Instead, expenditures are capitalized only during the industrialization phase of a product development project. The other costs from research and development are charged to income when incurred. Examples of the way certain types of costs are capitalized/expensed are:

- Materials, equipment, and facilities are expensed at their entire cost, unless the items have alternative future uses carry the items as inventory and allocate as consumed or capitalize and depreciate as used.
- Personnel like salaries, wages, and other related costs of personnel engaged in R&D should be expensed as incurred.
- Purchased intangibles should be recognized and measured at fair value. After initial recognition, account for in accordance with their nature.
- The cost of services performed by others in connection with the reporting company's R&D should be expensed as incurred.
- Indirect costs shall be included in R&D costs, except for general and administrative cost, which must be clearly related in order to be included and expensed.
- Start-up costs, initial operating costs, and advertising costs are also expensed as incurred.

c) The R&D costs that Volvo Group capitalizes each period (labeled Product and software development costs) are amortized in subsequent periods, similar to other capital assets such as property and equipment. Notes to Volvo's financial statements disclose that capitalized product and software development costs are amortized over three to eight years. What factors would the company consider in determining the amortization period for particular costs?

Costs	Depreciation Periods (Years)
Capitalized type-specific tools	2-8
Operational Leases	3-5
Machinery	5-20
Buildings and Investment Property	25-50
Land Improvements	20
Trademarks	20
Distribution Networks	10
Product and Softward Development	3-8
Aircraft Engine Projects	20

The factors that the company would consider in determining the amortization period for particular costs are: looking at what the different cost is, looking at prior years depreciation for that cost, and lastly, what method is being used.

d) Under U.S. GAAP, companies must expense all R&D costs. In your opinion, which accounting principle (IFRS or U.S. GAAP) provides financial statements that better reflect costs and benefits of periodic R&D spending?

I think that IFRS provides financial statements that better reflect costs and benefits of periodic R&D spending because IFRS permits revaluation on limited-life intangible assets (except for goodwill and other indefinite-life intangible assets). They permit some capitalization of internally generate intangible assets if it is probable there will be a future benefit and the amount can be reliably measured. Also, an impairment test is required on each reporting date for long-lived assets and intangibles and records an impairment if the asset's carrying amount exceeds its recoverable amount.

PROCESS QUESTIONS

e) Refer to footnote 14 where Volvo reports an intangible asset for "Product and software development." Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.

1) What is the amount of the capitalized product and software development costs, net of accumulated amortization at the end of fiscal 2009? Which line item on Volvo Group's balance sheet reports this intangible asset?

Total Product and Software Development Costs – Total Accumulated Depreciation and Amortization = Amount of capitalized product and software development costs, net

25,148 - 13,739 = 11,409

The line item on Volvo Group's balance sheet that reports this intangible asset is within assets, specifically within intangible assets for 2009.

2) Create a T-account for the intangible asset "Product and software development," net of accumulated amortization. Enter the opening and ending balances for fiscal 2009. Show entries in the T-account that record the 2009 capitalization (capital expenditures) and amortization. To simplify the analysis, group all other account activity during the year and report the net impact as one entry in the T-account.

Product and Software Development, Net	
(Beg. Balance) 12,381 (Amts. Capitalized) 2,602	 3,126 (Amortization) 448 (Other Activity)
(End Balance) 11,409	

f) Refer to Volvo's balance sheet, footnotes, and the eleven-year summary. Assume that the product and software development costs reported in footnote 14 are the only R&D costs that Volvo capitalizes.

1) Complete the table for Volvo's Product and software development intangible asset.

Figure 6.1: Volvo Group Product and Software Development Intangible Asset Table

(in SEK millions)	2007	2008	2009
1. Product and software development costs capitalized during the year	2,057	2,150	2,602
2. Total R&D expense on the income statement	11,059	14,348	13,193
3. Amortization of previously capitalized costs (included in R&D expense)	2,357	2,864	3,126
4. Total R&D costs incurred during the year = 1 + 2 - 3	10,759	13,634	12,669

2) What proportion of Total R&D costs incurred did Volvo Group capitalize (as product and software development intangible asset) in each of the three years?

Figure 6.2: Costs Incurred Capitalized by Volvo Group

Years	Proportion of Total R&D costs incurred that Volvo Group capitalized as product and software development intangible asset
2007	2,057/10,759=19.12%
2008	2,150/13,634=15.77%
2009	1,858/11,925=15.58%

g) Assume that you work as a financial analyst for Volvo Group and would like to compare Volvo's research and development expenditures to a U.S. competitor, Navistar International Corporation. Navistar follows U.S. GAAP that requires that all research and development costs be expensed in the year they are in incurred. You gather the following information for Navistar for fiscal year end October 31, 2007 through 2009.

(in US $ Millions)	2007	2008	2009
Total R&D costs incurred during the year, expensed on the income statement	375	384	433
Net Sales, manufactured products	11,910	14,399	11,300
Total Assets	11,448	10,390	10,028
Operating income before tax	(73)	191	359

1) Use the information from Volvo's eleven-year summary to complete the following table:

Figure 6.3: Volvo Group Net Sales and Total Assets Table

(in SEK Millions)	2007	2008	2009
Net sales, industrial operations	285,405	303,667	218,361
Total assets, from balance sheet	321,647	372,419	332,265

2) Calculate the proportion of total research and development costs incurred to net sales from operations (called, net sales from manufactured products, for Navistar) for both firms. How does the proportion compare between the two companies?

Volvo

Figure 6.4: Volvo Group's Proportion of Total Research and Development Costs Incurred to Net Sales from Operations

	2007	2008	2009
Total R&D	10,759	13,634	12,669
Net Sales from Operations	276,795	294,932	208,487
Proportion of R&D incurred to Net Sales from Operations	3.89%	4.62%	6.08%

Navistar

Figure 6.5: Navistar's Proportion of Total Research and Development Costs Incurred to Net Sales from Operations

	2007	2008	2009
Total R&D	375	384	433
Net Sales from Operations	11,910	14,339	11,300
Proportion of R&D incurred to Net Sales from Operations	3.15%	2.68%	3.83%

The proportions for Navistar are much lower than the proportions for Volvo. For 2008 and 2009, Navistar's proportions are about half of what they are for Volvo. Looking at just Volvo, we can see that the proportions of R&D are increasing from 2007 to 2009.

CONCLUSION

Research activities include planned search or critical investigation aimed at discovery of new knowledge. Development activities include translation of research findings or other knowledge into a plan or design for a new product or process or for a significant improvement to an existing product or process whether intended for sale or use. In general, all research and development costs are to be charged to expense when incurred. Volvo Group capitalizes certain R&D costs and expenses others. The R&D costs that Volvo Group capitalizes each period are amortized in subsequent periods, similar to other capital assets such as property and equipment. The factors that the company would consider in determining the amortization period for particular costs are looking at prior years depreciation and what method is being used.

Under U.S. GAAP, companies must expense all R&D costs while on the other hand, the IFRS permits revaluation on limited-life intangible assets (except for goodwill and other indefinite-life intangible assets).

This case focused on Research and Development in many different ways. It began with concepts to gain an understanding of what exactly R&D expenditures are. Next, there were process questions that were more applicable. In this section, we looked at amortization amounts, T-accounts, and also finding the amount of R&D costs within tables. Lastly, there was an analysis section, where Volvo Group was compared with Navistar to gain a further understanding through a comparison of two companies. Through these three sections, information can be interpreted from a variety of different angles about R&D expenditures.

CASE 7
DATA AND ANALYTICS: IBM WATSON

Case #7 involved eleven data and analytics tools and each group was assigned one to research and understand entirely. The case involved four detailed questions that each group had to answer using their data and analytics tools. This case allowed each group to understand how data and analytics are used within accounting but each in a slightly different way depending on the tool assigned.

OPENING STATEMENT

The seventh case involves a variety of data and analytics tools that allowed each group to focus on one tool. The eleven tools that were included in this case are: Alteryx, Domo, Google Fusion, Hadoop, IBM Watson, IDEA, Microsoft Power BI, Python, SAS, Splunk, and Tableau. Specifically, my group focused on IBM Watson.

IBM Watson is an automated system that answers questions through artificial intelligence and analytical software. This is not any typical software though. This software is extremely effective and efficient. In fact, it is way more effective than standard search technology that is used every day by the human population.

This case dives deeper into IBM Watson not only about the system in general, but in an accounting sense as well. It is broken down in many different ways to discover how this automated system is really used.

IBM WATSON – 4 ANALYSIS QUESTIONS

1. Identify the history and purpose of this tool and describe, in general, how it is used to make business decisions. Be specific about what kind of technology platform it uses, etc. and other resources that need to be in place to fully utilize the functionality of the tool.

IBM Watson is a computerized system called Deep QA that is able to answer questions using artificial intelligence and analytical software. This software is more effective and efficient than the standard search technology that majority of the population has on their phone or computer. IBM Watson answers the question with a direct answer rather than returning many possible results in which a search engine does. This system even participated on the show *Jeopardy!* in 2011 against two of the top contestants and still was able to beat them. The device can perform text mining and analytics on a greater volume of unstructured data, making it far superior to a standard search engine.

IBM Watson can help make business decisions in many ways. First, by using IBM Watson, you can perform quicker, more efficient research by extracting the information that is not important. Next, you can communicate and interact with coworkers and customers that fits your personality. Another way, is to monitor everything within the business, which enables a way to prevent risks and keep everything moving smoothly. Next, IBM Watson allows you to have a better understanding of information and make better recommendations with more confidence. Additionally, when employees around you learn, it allows you to learn too through the availability of the

information gained. Lastly, the system keeps the business up to date and prevents risks on all aspects.

2. What special skills are needed to use this tool to aid in business decision making. How might a student like yourself gain those skills?

There is an IBM Learning Lab 101 that helps beginners getting started with IBM Watson. There are interactive courses that cover the basics on programming. Most of these courses are free and are available to take at any time and at any pace. There are around 140 courses available through this lab.

IBM Watson Knowledge Studio allows people to also gain a better understanding through a machine-learning model. Watson can be trained in the knowledge studio for a particular industry. A machine-learning model is created in the studio that then understands the language of the industry and only becomes more accurate over time through testing. Once the model is finished, it will be able to find mentions of entities, conferences, and relations.

For a student like myself expected to graduate from college soon, taking courses like principles of programming, calculus and algebra classes, computer systems classes, etc. will allow a better of understanding of how to work with these computerized systems with artificial intelligence. Specifically focusing on the accounting industry transforming into a new era of technology, even a basic understanding and background of data analytics can put you ahead of other students in your class.

3. How, specifically, would you use the tool in the following business settings? Create at least three specific scenarios for each category in which the tool would lead to more efficient and/or better effectiveness. Be sure to describe what kinds of data your tool would use for each scenario.

a. Auditing

Within auditing, IBM Watson would be extremely useful. Some of the tasks that are a part of auditing are not necessarily difficult, but can be extremely tedious.

The first scenario is about the assertion of completeness. Completeness is making sure that all of the transactions are in the financial statements that were supposed to be there in the first place. For example, performing the task of making sure that all of the sales transactions have been included and none of these transactions have been left out of the financial statements. This can be extremely time consuming for employees to sit down and double-check for hours. Therefore, implementing IBM Watson to check the data and make sure the correct amount is there, would make the company much more efficient.

The second scenario is about the assertion of existence. Existence is making sure that all of the balance sheet items are actually where they say they are at the end of the period. This is extremely important for assets, and specifically inventory at period end. A physical inventory count is performed at the end of each fiscal year for this reason—to make sure that each item is accounted for. Therefore, using IBM Watson there would be an accurate count of inventory at all times of what should be on hand at a given time. The system

would save time once again and make the inventory counting process run much more smoothly.

The last scenario is with the assertion of valuation. Valuation is making sure that the balance sheet items have also been recorded at their correct value. One of the most difficult things to come to a correct valuation of is inventory. Companies have to decide what the best inventory method is for their products or services and use LIFO, FIFO, or weighted-average. IBM Watson could check these figures and make sure they are valued correctly much quicker than an employee could check. This would save time and also perform without any errors.

b. Tax Planning

The first scenario within tax planning has to do with the goal of tax planning. The goal of tax planning is to minimize the legal worldwide tax payment. This is done by establishing a legal entity in a country with a low tax and giving the rights of its intangible assets to this entity to receive lower taxes. By allowing IBM Watson to sort through the data, the system can easily determine how to minimize the tax payment. It can be extremely difficult to figure out all of the steps needed to start an entity in a country that you do not know much about, this is why IBM Watson would be the most effective way to find out how to do this.

Another scenario that is a big challenge within tax planning is fraud. Fraud can be extremely difficult to recognize or pick up on and usually is found after the fact. When this is the case, IBM Watson can make the process of finding suspicious amounts extremely efficient and improve the speed dramatically. IBM

Watson can take all of not only the historical data, but also the new data and analyze all of the trends.

A third scenario within tax planning is analyzing the profitability. Profitability could be affected just by manufacturing in the wrong state or even higher depreciation rates within certain areas. Profitability is another big idea that has to be considered when analyzing taxes. If a company is manufacturing items in a state with higher taxes, they could be saving money and making more of a profit if they produced these same items in a state with lower taxes. This is something that IBM Watson could easily look at and quickly produce where the company should be producing these items for the best return.

c. Financial Statement Analysis/Valuation/Advisory

Within advisory, firms need a multitude of data in order to make financial recommendations and give beneficial advice. This where IBM Watson can be extremely useful with data from current market conditions, the client's data, etc. With all of this data easily accessible through this computerized system, the data can all be easily managed and recommendations can be formed quickly. In fact, IBM Watson can simply sort through the data and find the most important aspects to reproduce advice with the data that is found.

Another scenario is determining how much variation there is in financial statements over the years. This is important to realize what is changing over the years and why that is. Is the company becoming more profitable or less profitable year after year? By implementing IBM Watson to compare the financial statements over sequential years, patterns and trends can easily be found quicker.

Using IT for financial statement analysis has many benefits that in the end save money and time. Using IT not only prevents error, but also finds and corrects errors in a much quicker process than physically entering data into financial statements. Using IBM Watson, you are simply allowing the company to run smoother and more efficient. There are so many benefits with implementing this into the company. The accounting industry is moving more and more towards automation to prevent error, save time, perform better, and so much more.

4. Write a few paragraphs to your future public accounting partner explaining why your team should invest in the acquisition of and training in this tool. Explain how the tool will impact the staffing and scope of your future engagements.

To Whom It May Concern:

My team and I have discussed at great length whether or not we should invest in the acquisition of and training in IBM Watson. There are pros and cons to everything, but in this case the pros greatly outweigh the cons.

The pros of IBM Watson include uploading large data sets and exploring/analyzing the data in many different ways like comparing and contrasting, checking for errors and suspicious amounts, checking completeness and validity, and so much more. IBM Watson also is affordable and the benefits of the computerized system outweigh the costs in the long run. It shortens the amount of time of tedious tasks and makes processes run much more effectively. Once IBM Watson is implemented, it is extremely easy to operate and not many skills of employees are needed. This automated

system takes the place of what many employees would sit working on for hours in a normal workday. Therefore, this system would also save on salaries and wages of employees if fewer employees are needed.

The first possible con of implementing IBM Watson is the reluctance of change from employees. Employees have a hard time seeing normal processes that they are used to and comfortable with suddenly change one day. These employees will have to maybe take a couple classes, be trained, and become comfortable with this new technology, which can be difficult to adjust to. Another con is the possibility of employees relying too much on technology to the point where they cannot remember how to do simple accounting tasks that they used to do all the time. Although technology can make everyone's life easier, there is still a happy medium between how much technology should be used.

With that being said, it is apparent that the pros outweigh the cons and that IBM Watson should be implemented to create a better and more efficient work environment.

CONCLUSION

In conclusion, IBM Watson is an extremely powerful automated system that when implemented into normal operations of large companies, it can help the employers and the company reach ultimate success. The system can find things that humans might never physically find. It can also find things at a much, much faster rate than a typical human. This system takes away the tedious, time consuming tasks and sorts through data to find what really matters and what the company is ultimately looking for.

The use of these automated processes highlights one key area—the need for fewer employees. By integrating this system into daily operations, you are taking away the task that an employee at one time or another was doing for the company. Therefore, this shows that with automation coming more and more into play within daily operations, fewer employees are needed.

In the end, the benefits of IBM Watson will exceed the cost in the long term. This era is moving forward with technology at a growing rate and in order to keep from falling behind, this system is the step in the right direction for any company.

CASE 8
RITE AID CORPORATION – LONG-TERM DEBT

Case #8 involved the third largest retail pharmacy in the US called Rite Aid. The majority of Rite Aid's sales are from filling prescriptions, but they also sell a wide assortment of other merchandise (including 3,000 products under their own private brand).

OPENING STATEMENT

The eighth case primarily focuses on long-term debt within Rite Aid's financial statements. Specifically, this case takes a closer look at how to report debt and what to disclose, the meaning of some of the terms associated with debt, premiums and discounts that are associated with long-term debt, journal entries, interest rates, and much more that will be discussed in further detail below.

Long-term debt consists of probable future sacrifices of economic benefits arising from present obligations that are not payable within a year/operating cycle of the company, whichever is longer. Some common examples of long-term debt include: bonds payable, long-term notes payable, and mortgages payable. An important aspect attached to long-term debt is the different interest rates. The stated/coupon/nominal rate is the rate that is written in the terms of the bond. This rate is set by the issuer and is also stated as a percentage of the face value of the bond. The market rate/discount rate/effective yield is the rate of interest that is actually earned by the bondholders. As this case continues, you will continue to find more and more information about the most important aspects of long-term debt.

CONCEPTUAL QUESTIONS

a. Consider the various types of debt described in note 11, Indebtedness and Credit Agreement.

1. Explain the difference between Rite Aid's secured and unsecured debt. Why does Rite Aid distinguish between these two types of debt?

Secured bonds are backed by a pledge of some sort of collateral and unsecured bonds are not backed by a collateral. When bonds are secured, if the debtor does not make its payments, the creditor will have the right to take assets that are tied to the bond. Rite Aid distinguishes between these two types of debt so they can easily be found in the financial statements which liabilities have assets tied to them and which do not. It is not only important for companies to clearly identify which liabilities are secured but also indicate the related assets that are pledged as collateral.

2. What does it mean for debt to be "guaranteed"? According to note 11, who has provided the guarantee for some of Rite Aid's unsecured debt?

In note 11 it states that: "Substantially all of Rite Aid Corporation's wholly-owned subsidiaries guarantee the obligations under the senior secured credit facility." Therefore, the subsidiary guarantees for some of Rite Aid's unsecured debt. In this case, for debt to be "guaranteed" it means that the subsidiaries have guaranteed to pay in the case that Rite Aid cannot pay.

3. What is meant by the terms "senior," "fixed-rate," and convertible"?

Senior debt is money that must be paid first if the company is going out of business. Therefore, if a company goes bankrupt, the senior debtholders will be paid first and have a very likely chance of getting their money. Fixed-rate is a bond that pays the same amount of interest for its entire term. This rate is easy to predict because it is unchanging. Therefore, the bondholder will be able to calculate the exact amount of return that they will receive. Lastly, a convertible bond is another type of debt security that can be converted into a predetermined amount of the company's equity at a specified time during the life of the bond.

4. Speculate as to why Rite Aid has many different types of debt with a range of interest rates.

Rite Aid has many different types of debt with a range of interest rates because of the terms. The interest rates vary, as well as the amount of time outstanding, the date of issuance, the face value, the interest payments, etc. Therefore, Rite Aid has to specify each of these terms that are tied to each type of debt.

b. Consider note 11, Indebtedness and Credit Agreement. How much total debt does Rite Aid have at February 27, 2010? How much of this is due within the coming fiscal year? Reconcile the total debt reported in note 11 with what Rite Aid reports on its balance sheet.

Rite Aid has a total debt amount of $6,370,899, which is reconciled in the table below. The amount of this total debt that is due within the coming fiscal year is $51,502.

Figure 8.1: Rite Aid Corporation Total Debt Reconciliation

Total Debt Reconciliation		
Current Liabilities	$	51,502
Long-Term Debt		6,185,633
Lease Obligations		133,764
Total Debt	**$**	**6,370,899**

c. Consider the 7.5% senior secured notes due March 2017.

1. What is the face value (i.e. the principal) of these notes? How do you know?

The face value (principal) of these notes is $500,000. We know that this note was issued at par because there were no interest payments made within the year shown on the financial statements. If interest payments had been made, the carrying value would have either increased or decreased depending on whether there was a discount or a premium.

2. Prepare the journal entry that Rite Aid must have made when these notes were issued.

The journal entry that Rite Aid must have made when these notes were issued includes a debit to cash and credit for the notes payable.

Cash	500,000	
Note Payable		500,000

3. Prepare the annual interest expense journal entry. Note that the interest paid on a note during the year equals the face value of the note times the stated rate (i.e., coupon rate) of the note.

The annual interest expense can be calculated by multiplying the face value times the interest rate. Therefore, in this case it would be $500,000 * 7.5% = $37,500. This amount will be paid once every year because the interest expense is annually. The journal entry for interest expense includes a debit to interest expense and a credit to cash. This journal entry for the annual interest expense would decrease assets and also decrease equity on the balance sheet.

Interest Expense	37,500	
Cash		37,500

4. Prepare the journal entry that Rite Aid will make when these notes mature in 2017.

As it states in the summary of indebtedness, the 7.5 percent senior secured notes are due March 2017, which is when the notes mature. The journal entry for when notes mature includes a debit to notes payable and a credit to cash. This journal entry for when the notes mature would decrease assets and also decrease liabilities on the balance sheet.

Notes Payable	500,000	
Cash		500,000

d. Consider the 9.375% senior notes due December 2015. Assume that interest is paid annually.

1. What is the face value (or principal) of these notes? What is the carrying value (net book value) of these notes at February 27, 2010? Why do the two values differ?

The face value of these notes is $410,000. The carrying value can be found be taking the face value and subtracting the unamortized discount. The carrying value is the face value plus any premiums or minus any discounts. In this case, the carrying value is found by subtracting the discount from the face value. As calculated below, the carrying value is $405,951.

Figure 8.2: Rite Aid Corporation Net Book Value of Notes

Net Book Value of Notes	
Face Value	$ 410,000
Unamortized Discount	4,049
Carry Value	**$ 405,951**

2. How much interest did Rite Aid pay on these notes during the fiscal 2009?

The annual interest payment can be found by taking the face value * rate * amount of time.

$410,000 * .09375 = $38,438

Therefore, the total amount of interest during fiscal 2009 is $38,438. The journal entry including this amount is shown below in #4.

3. Determine the total amount of interest expense recorded by Rite Aid on these notes for the year ended February 27, 2010. Note that there is a cash and a noncash portion to interest expense on these notes because they were issued at a discount. The noncash portion of interest expense is the amortization of the discount during the year (that is, the amount by which the discount decreased during the year).

The total amount of interest expense is not just the amount calculated above. The amount of the discount amortized also has to be taken into consideration. To find the amount of discount that has been amortized, you subtract the unamortized discounts from the two years on the financial statements. The calculation is: $4,754-$4,049=$705. $705 is the discount amortized for the fiscal year ended 2/27/10. To find the total amount of interest expense, you add the discount on the note payable ($705) to the amount of cash payment ($38,438) to get the total of $49,143.

4. Prepare the journal entry to record interest expense on these notes for fiscal 2009. Consider both the cash and discount (noncash) portions of the interest expense from part 3 above.

The journal entry to record interest expense on these notes for fiscal 2009 includes both of the parts calculated in #2 and #3 above. Since we have already calculated these amounts, we just simply plug them into the journal entry and sum up the cash and discount on notes payable to get the total amount of interest

expense. The interest expense is debited and the cash payment and discount on notes payable are credited. This journal entry would also decrease assets and decrease equity on the balance sheet.

Interest Expense	39,143	
Cash		38,438
Discount on Note Payable		705

5. Compute the total rate of interest recorded for fiscal 2009 on these notes.

The total rate of interest recorded for fiscal 2009 on these notes can be computed by taking the interest expense that was calculated above and dividing by the beginning carry value. Therefore, $39,143/$405,246 = 9.66%.

e. Consider the 9.75% notes due June 2016. Assume that Rite Aid issued these notes on June 30, 2009 and that the company pays interest on June 30th of each year.

1. According to note 11, the proceeds of the notes at the time of issue were 98.2% of the face value of the notes. Prepare the journal entry that Rite Aid must have made when these notes were issued.

The face value of the note is $410,000, but this note is issued at a discount. Because it is stated in note 11 that the proceeds of the notes at the time of issue were 98.2 percent, we can multiply .982 * $410,000 to get the cash proceeds of $402,620. We can now find the discount by taking the face value and subtracting the cash proceeds.

Figure 8.3: Rite Aid Corporation Discount on Note Payable

Discount on Note Payable	
Face Value	$ 410,000
Cash Proceeds	(402,620)
Discount on Note Payable	**$ 7,380**

Therefore, the journal entry can now be found for when these notes were issued. This journal entry would increase assets and increase liabilities on the balance sheet.

Cash	402,620	
Discount on Notes Payable	7,380	
Note Payable		410,000

2. At what effective annual rate of interest were these notes issued?

In order to find the effective annual rate of interest that these notes were issued at, we can use Microsoft excel. This can be easily computed with the information we already know. In excel, the RATE function is used by entering the number of periods, the cash interest payment, the cash proceeds, and the face value. The number of periods is 7, the present value or cash proceeds is $402,620, the face value is $410,000 and the cash interest payment is $39,975. The cash interest payment can be found by multiplying the face value of $410,000 * .0975. Once all of these amounts are plugged into the RATE function in excel, the effective interest rate should be computed to get 10.1212 percent.

3. Assume that Rite Aid uses the effective interest rate method to account for this debt. Use the table that follows to prepare an amortization schedule for these notes. Use the last column to verify that each year's interest expense

reflects the same interest *rate* even though the *expense* changes. *Note:* Guidance follows the table.

Figure 8.4: Rite Aid Corporation Amortization Schedule

Date	Interest Payment	Interest Expense	Bond Discount Amortization	Net Book Value of Debt	Effective Interest Rate
6/30/09	$ -	$ -	$ -	$ 402,620	10.1212%
6/30/10	39,975	40,750	775	403,395	10.1212
6/30/11	39,975	40,828	853	404,248	10.1212
6/30/12	39,975	40,915	940	405,188	10.1212
6/30/13	39,975	41,010	1,035	406,223	10.1212
6/30/14	39,975	41,115	1,140	407,363	10.1212
6/30/15	39,975	41,230	1,255	408,618	10.1212
6/30/16	39,975	41,357	1,382	410,000	10.1212

-June 30, 2009 *Net Book Value of Debt* is the initial proceeds of the bond issuance, net of costs. The face value of this debt is $410,000; the discount is $7,380; the coupon rate is 9.75% and the effective rate (including fees) is 10.1212%.

-Interest Payment is the face value of the bond times the coupon rate of the bond.

-Interest Expense equals opening book value of the debt times the effective interest rate.

-The difference between the interest payment and interest expense is the amortization of the bond discount. This is equivalent to saying that interest expense equals the interest paid plus the amortization of the bond discount.

-Amortizing the discount increases the net book value of the bond each year.

4. Based on the above information, prepare the journal entry that Rite Aid would have recorded February 27, 2010, to accrue interest expense on these notes.

In order for Rite Aid to accrue interest expense on these notes on February 27, 2010, the journal entry would include a debit to interest expense and credits to the discount on notes payable and interest payable. This journal entry would increase liabilities and decrease equity on the balance sheet.

Interest Expense	27,167	
Discount on Note Payable		517
Interest Payable		26,650

5. Based on your answer to part 4, what would be the net book value of the notes at February 27, 2010?

The book value of the notes at February 27, 2010 can be found by adding the beginning period's carrying value plus the discount amortized in the journal entry above. Therefore, $402,620 + $517 = $403,137.

CONCLUSION

To conclude this case, long-term debt can be a difficult topic to not only account for but also understand. Once again, long-term debt consists of probable future sacrifices of economic benefits arising from present obligations that are not payable within a year/operating cycle of the company, whichever is longer. Two main ways to classify debt are secured and unsecured debt. Secured bonds are backed by a pledge of some sort of collateral and unsecured bonds are not backed by a collateral. It is important to classify which of these and to organize them in such a way that they can be found easily in the financial statements which liabilities have assets tied to them and which do not.

Looking at the financial statements, a note is issued at par if there were no interest payments that were made within the fiscal year. If interest payments had been made, the carrying value would have either increased or decreased depending on whether there was a discount or a premium on the note.

Companies take on long-term debt primarily for one reason, to receive immediate capital. There is a point though when companies take on too much debt that it ends up hurting them in the long run. Companies strive to have a low debt-to-equity ratio, meaning that the company is not so much relying on its debt to make payments.

CASE 9
MERCK & CO., INC. AND GlAXOSMITHKLINE PLC – SHAREHOLDERS' EQUITY

Case #9 involves two healthcare related companies, Merck & Co., Inc. and GlaxoSmithKline plc. Although, this case is only going to focus on Merck & Co. Merck & Co. is headquartered in New Jersey.

OPENING STATEMENT

The ninth case primarily focuses on Shareholders' Equity within Merck's financial statements. Specifically, this case allows for a better understanding of shareholders' equity disclosures, why companies pay dividends, and why companies repurchase their stock. These ideas and concepts will be discussed more thoroughly throughout the case.

It is important to understand Shareholders' Equity because it is one of the main ways to tell how a company is performing. We see a little bit of this in part i when computing ratios from the information in the financial statements and comparing the ratios over 2 years of performance. In this case, it is obvious that Merck did much better in one year over the other just by looking at these ratios.

CONCEPTUAL QUESTIONS

a. Consider Merck's common shares.

1. How many common shares is Merck authorized to issue?

Authorized shares are the total amount of shares that the company is allowed to issue. In this case, Merck is authorized to issue 5,400,000,000 shares, which can be found in the consolidated balance sheet for Merck under the liabilities and stockholders' equity section.

2. How many common shares has Merck actually issued at December 31, 2007?

At December 31, 2007, Merck has actually issued 2,983,508,675 shares. This can be found in the same place as the number of authorized shares. The number of issued shares is less than the number of authorized shares because not all of the shares have been issued yet.

3. Reconcile the number of shares issued at December 31, 2007, to the dollar value of common stock reported on the balance sheet.

When looking at the consolidated balance sheet, you will notice that the number of issued shares is much greater than the actual dollar amount of common stock. The reason for this is because the line on the balance sheet reads "common stock, one cent par value", meaning each share of stock is valued at 1 cent each. To find

the dollar amount, the number of shares is multiplied by the par value to get $29.8 on the balance sheet.

4. How many common shares are held in treasury at December 31, 2007?

Treasury stock is the number of shares that the company keeps as its own. Treasury stock either was never issued in the first place or it was bought back from shareholders. Treasury stock is carried on the balance sheet with a negative balance because it is a contra-equity account. They also are shown on the balance sheet "as cost", as opposed to at par value or excess of par value. At December 31, 2007, there are 811,005,791 shares of treasury stock on the balance sheet.

5. How many common shares are outstanding at December 31, 2007?

The number of outstanding shares can be found by taking the number of issued shares and subtracting the amount of treasury shares.

2,983,508,675 - 811,005,791 = 2,172,502,884

6. At December 31, 2007, Merck's stock price closed at $57.61 per share. Calculate the total market capitalization of Merck on that day.

The total market capitalization is simply the market value of a company's outstanding shares. At December 31, 2007, Merck's stock price closed at $57.61 per share and the number of common shares outstanding calculated in the question above is 2,172,502,884. Therefore, the total market capitalization of Merck on that day is $125,157,891,147.

c. Why do companies pay dividends on their common or ordinary shares? What normally happens to a company's share price when dividends are paid?

Companies pay dividends on their common or ordinary shares because it portrays them as a strong company that is profitable and able to pay its investors. This is a way to also attract investors because of the steady income.

Normally when dividends are paid, a company's share price decreases by the number of shares that are paid. They decrease because the value of the shares is also decreasing.

d. In general, why do companies repurchase their own shares?

When companies repurchase their own shares, the shares are called treasury shares. There are many reasons why a company might do this. First, companies might repurchase their shares if there are no potential growth opportunities in the near future. Next, it also increases financial ratios to make the company look better, especially earnings per share ratio.

e. Consider Merck's statement of cash flow and statement of retained earnings. Prepare a single journal entry that summarizes Merck's common dividend activity for 2007.

Dividends Declared	3,310.70	
Dividends Payable		3.40
Cash		3,307.30

[in millions]

The amounts in this journal entry can be found in different places within the case. First, the dividends declared can be found in the consolidated statement of retained earnings under the line "Dividends Declared on Common Stock". Next, the amount of cash dividends can be found under the consolidated statement of cash flows within the financing activities and under the line "Dividends paid to stockholders". Lastly, the dividends payable is just the difference between dividends declared and cash.

g. During 2007, Merck repurchased a number of its own common shares on the open market.

1. Describe the method Merck uses to account for its treasury stock transactions.

Merck uses the Cost Method to account for its treasury stock transactions as stated in the consolidated balance sheet under the treasury stock line item at the bottom. The Cost Method is just recorded at the amount of the purchase of stock.

2. Refer to note 11 to Merck's financial statements. How many shares did Merck repurchase on the open market during 2007?

According to note 11, Merck repurchased 26.5 million shares on the open market during 2007.

3. How much did Merck pay, in total and per share, on average, to buy back its stock during 2007? What type of cash flow does this represent?

In total, Merck paid 1,429.7 to buy back its stock during 2007. This amount can also be found on the statement of cash flows under the line "Purchases of Treasury Stock". Merck paid $53.95 per share. This amount is found by taking $1,429,000,000 and dividing it by the number of shares of 26,500,000. This represents a cash flow from financing activities.

4. Why doesn't Merck disclose its treasury stock as an asset?

As stated above in the beginning of the case, Merck does not disclose its treasury stock as an asset. Treasury stock is carried on the balance sheet with a negative balance because it is a contra-equity account that decreases the amount of equity.

ANALYTICAL QUESTIONS

i. Determine the missing amounts and calculate the ratios in the tables below. For comparability, use dividends paid for both companies rather than dividends declared. Use the number of shares outstanding at year end for per-share calculations. What differences do you observe in Merck's dividend-related ratios across the two years? What differences do you observe in the two companies' dividend-related ratios?

When comparing the ratios in the second part of the table below, it is noticeable that Merck did better in 2006 than they did in 2007. Every ratio is higher in 2006 except for dividend payout. Merck needs to improve their ratios in 2008 in order to attract more investors rather than lose them due to these decreasing ratios. The ratios have been calculated in the chart below based on pulling numbers out of the top part of the chart and the formulas in the chart below.

Figure 9.1: Merck & Co., Inc. and GlaxoSmithKline PLC Calculation of Dividend Ratios

Merck ($ - in Millions)		
	2007	**2008**
Dividends Paid	$ 3,307	$ 3,323
Shares Outstanding	2,173	2,168
Net Income	$ 3,275	$ 4,434
Total Assets	$ 48,351	$ 44,570
Operating Cash Flows	$ 6,999	$ 6,765
Year-end Stock Price	$ 57.61	$ 41.94
Dividends Per Share	$ 1.52	$ 1.53
Dividend Yield (dividends per share to stock price)	2.64%	3.65%
Dividend Payout (dividends to net income)	1.01	0.75
Dividends to Total Assets	0.068	0.075
Dividends to Operating Cash Flows	0.47	0.49

Figure 9.2: Merck & Co., Inc. and GlaxoSmithKline PLC Dividend Ratio Formulas

Dividend Ratio Formulas	
Dividends Per Share	Dividends/# of Shares
Dividend Yield	Dividends Per Share/Price Per Share
Dividend Payout	Dividends/Net Income
Dividends to Total Assets	Dividends/Total Assets
Dividends to Operating Cash Flows	Dividends/Operating Cash Flows

CONCLUSION

The beginning of the case focused on the difference between shares that are authorized, shares that are issued, and shares that are outstanding. It is important to understand the meaning of these different types of shares, including treasury stock as well. The amounts of these shares are found in the financial statements or calculated based on the information that is given. This case sets you up for finding different amounts throughout the case and then adding up your thoughts to find the missing information.

The dividend ratios in part I of this case are very important to grasp and understand what they mean. Companies compare these ratios over many years to realize which years they have done better and which years they have not done so well. It is imperative that a company is improving their ratios so that the company appeals to investors.

This case allows for a better understanding of not only the concepts, but also where to find the number of shares and the dollar amounts within the financial statements. Although the concepts and journal entries are covered in accounting classes, it is extremely helpful to understand how to calculate and find these numbers within the financial statements. This case sets students up for what they will be doing beginning with an internship.

CASE 10
STATE STREET CORPORATION – MARKETABLE SECURITIES

Case #10 involves a company called State Street Corporation that is a major financial holding company. The company's headquarters is in Boston. They operate primarily through their banking subsidiary, State Street Bank and Trust.

OPENING STATEMENT

The tenth case primarily focuses on marketable securities, specifically focusing on trading, available-for-sale, and held-to-maturity securities. This case compares these three types of securities. It looks at the differences between how each security is valued on the financial statements and also the differences within the journal entries for each of them. It is important to also realize what is disclosed in the footnotes about each of these securities.

Many companies invest in debt securities to earn a high rate of return. Debt securities represent a creditor relationship with another entity. The debt securities are broken into 3 different categories (Held-to-maturity, Trading, and Available-for-sale) because they are all accounted for differently.

CONCEPTUAL QUESTIONS

a. Consider trading securities. Note that financial institutions such as State Street typically call these securities "Trading account assets".

1. In general, what are trading securities?

Trading Securities are one of three types of debt securities, but they can also be an equity security as well. Specifically, trading securities are debt securities that are bought and held primarily for sale in the near term (generally 3 months) to generate profit on short-term price differences. The entity intends to sell to make a profit from an increase in the price of the security. They are adjusted to the fair value and gains/losses are recognized in net income.

2. How would a company record $1 of dividends or interest received from trading securities?

If a company records $1 of dividends or interest received from trading securities, they would debit cash and credit either dividend revenue or interest revenue depending on which is received.

Cash	1	
Dividend Revenue/Interest Revenue		1

[In Millions]

3. If the market value of trading securities increased by $1 during the reporting period, what journal entry would the company record?

If the market value of trading securities increased by $1 during the reporting period, then the security must be recorded at its new value along with the unrealized gain in income. For an increase in fair market value, the company would debit the fair value adjustment account (trading) and credit unrealized holding gain – income.

Fair Value Adjustment (Trading Securities)	1	
Unrealized Holding Gain - Income		1

[In Millions]

b. Consider securities available-for-sale. Note that State Street calls these, "Investment securities available for sale."

1. In general, what are securities available-for-sale?

Available-for-sale securities are debt or equity securities that are purchased with the intent to sell before it reaches its maturity date. These securities are adjusted to fair market value and the gains/losses are recognized as other comprehensive income and as a separate component of stockholders' equity.

2. How would a company record $1 of dividends or interest received from securities available-for-sale?

To record $1 of dividends or interest received from securities available-for-sale, the company would debit cash and credit dividend revenue/interest revenue depending on whether dividends or interest is received from the securities.

Cash	1	
Dividend Revenue/Interest Revenue		1

[In Millions]

3. If the market value of securities available-for-sale increased by $1 during the reporting period, what journal entry would the company record?

If the market value of securities available-for-sale increased by $1 during the reporting period, the company would debit fair value adjustment and credit unrealized holding gain or loss – equity.

Fair Value Adjustment (AFS Securities)	1	
Unrealized Holding Gain - Equity		1

[In Millions]

c. Consider securities held-to-maturity. Note that State Street calls these, "Investment securities held-to-maturity."

1. In general, what are these securities? Why are equity securities never classified as held-to-maturity?

Held-to-maturity securities are debt securities that the company has the positive intent and ability to hold to maturity. These securities are classified as held-to-maturity only if it has both the positive intent and the ability to hold those securities to maturity. Equity securities are never classified as held-to-maturity because they have no maturity date. The fair market value is changing, but it is not recognized. Unrealized gains/losses are not recognized because the amortized cost method is used.

2. If the market value of securities held-to-maturity increased by $1 during the reporting period, what journal entry would the company record?

If the market value of securities held-to-maturity increased by $1 during the reporting period, the company would not make an entry. Held-to-maturity securities are accounted for at amortized cost, not fair value.

d. Consider the "Trading account assets" on State Street's balance sheet.

1. What is the balance in this account on December 31, 2012? What is the market value of these securities on that date?

State Street Corporation has $637 in "Trading account assets" on December 31, 2012. The market value of these securities is the same amount of $637 because trading securities are recognized at fair market value.

2. Assume that the 2012 unadjusted trial balance for trading account assets was $552 million. What adjusting journal entry would State Street make to adjust this account to market value? Ignore any income tax effects for this part.

If the 2012 unadjusted trial balance for trading account assets was $552 million, State Street would debit fair value adjustment and credit unrealized holding gain – income. The amount would be $85 million, which is found by subtracting $552 million from $637 million.

Fair Value Adjustment (Trading Securities)	85	
Unrealized Holding Gain - Income		85

e. Consider the balance sheet account "Investment securities held to maturity" and the related disclosures in Note 4.

1. What is the 2012 year-end balance in this account?

The 2012 year-end balance in “Investment securities held to maturity” is $11,379, which can be found on the balance sheet.

2. What is the market value of State Street’s investment securities held to maturity?

The market value of State Street’s investment securities held to maturity is $11,661, which is also found on the balance sheet. In this case, the fair value is listed in parenthesis next to the account name.

3. What is the amortized cost of these securities? What does “amortized cost” represent? How does amortized cost compare to the original cost of the securities?

Amortized cost is the acquisition cost adjusted for the amortization of discount or premium, if appropriate. This means that the acquisition cost is the amount that was paid when it was sold, while the amortized cost is the amount that will eventually reach the amount of the face value. In this case, the amortized cost is $11,379 and the fair market value is $11,661. The amortized cost amount of $11,379 includes the original cost plus or minus the premium or discount on the security.

4. What does the difference between the market value and the amortized cost represent? What does the difference suggest about how the average market

rate of interest on held-to-maturity securities has changed since the purchase of the securities held by State Street?

The difference between the market value and the amortized cost represents the difference between what is going on in the market vs. what is going with that specific security. Since the amortized cost of $11,379 is less than the market value, this suggests that the average market rate has decreased since the fair market value of the securities is higher than the amortized value.

f. Consider the balance sheet account "Investment securities available for sale" and the related disclosures in Note 4.

1. What is the 2012 year-end balance in this account? What does this balance represent?

The 2012 year-end balance in the account "Investment securities available for sale" is $109,682, which can be found on the balance sheet.

2. What is the amount of net *unrealized* gains or losses on the available-for-sale securities held by State Street at December 31,2012? Be sure to note whether the amount is a net gain or loss.

The amount of net unrealized gains or losses on the available-for-sale securities held by State Street at December 31, 2012 is $2,001 - $882 = $1,119. This amount is a gain because the unrealized gains and greater than the unrealized losses. These amounts can be found in Note 4 under the investment securities (excerpts).

3. What was the amount of net *realized* gains (losses) from sales of available-for-sale securities for 2012? How would this amount impact State Street's statements of income and cash flows for 2012?

The amount of net realized gains (losses) from sales of available-for-sale securities for 2012 is $101 - $46 = $55. These amounts can also be found in Note 4 on page 119. Once again, the realized gains from sales of AFS securities is greater than the amount of realized losses from sales of AFS securities. This amount is a gain that would go on the income statement under the section other revenues and gains. It would also be included in the statement of cash flows under the investing section.

g. State Street's statement of cash flow for 2012 (not included) shows the following line items in the "Investing Activities" section relating to available-for-sale securities (in millions):

Proceeds from sales of available-for-sale securities: $5,399

Purchases of available-for-sale securities: $60,812

1. Show the journal entry State Street made to record the purchase of available-for-sale securities for 2012.

Investments in AFS Securities	60,812	
Cash		60,812

[In Millions]

2. Show the journal entry State Street made to record the sale of available-for-sale securities for 2012. Note 13 (not included) reports that the available-for-sale securities sold during 2012 had "*unrealized pre-tax gains of $67 million as of December 31, 2011*." Hint: be sure to remove the current book-value of these securities in your entry.

The amount of realized gain from the sale of available-for-sale securities can be found on the consolidated statement of income under "Net gains (losses) from sales of investment securities". The amount of unrealized holding gains is stated in the problem above that is taken from note 13, which is not included but given instead. The proceeds from sales of available-for-sale securities are also stated in the problem above. Therefore, with this information, we can calculate the amount of investment securities (available-for-sale).

3. Use the information in part *g. ii* to determine the original cost of the available-for-sale securities sold during 2012.

After creating the journal entry in part 2 of this problem, I was able to back into the amount of the original cost of the available-for-sale securities that was sold during 2012. The amount of the original cost is $5,411.

CONCLUSION

This case was split up into questions that focused on trading securities, available-for-sale securities, and held-to-maturity securities. This case was split up this way in order to compare how each security is accounted for.

Trading securities are debt or equity securities that are bought and held primarily for sale in the near term to generate profit on short-term price differences. The entity intends to sell in the near future to make a profit from an increase in the price of the security. They are recognized at fair value and any gains or losses are recognized in net income.

Available-for-sale securities are debt or equity securities that are purchased with the intent to sell before it reaches its maturity date. They are recognized at fair value and any gains or losses are recognized as other comprehensive income and as a separate component of stockholders' equity.

Lastly, Held-to-maturity securities are just debt securities that the company has the positive intent and ability to hold to its maturity date. These securities are classified as held-to-maturity only if it has both the positive intent and the ability to hold these securities to maturity. For this type of security, gains and losses are not recognized because the amortized cost method is used instead.

This case allows for a better understanding of these securities that looks past just the concepts. It is important to realize where to find these amounts on financial statements and how to calculate amounts that are not straight forward. It is necessary to

understand what is disclosed in the footnotes as well. When all of this information is put together in this case, it helps one understand marketable securities on a higher level.

CASE 11
ZAGG INC. – DEFERRED INCOME TAXES

Case #11 involves a company called ZAGG, which stands for "Zealous About Great Gadgets". The company began designing protective, plastic shields for wristwatches in 2005. Although, today they are a market leader in mobile device accessories. ZAGG is currently traded on NASDAQ.

OPENING STATEMENT

The eleventh case primarily focuses on deferred income taxes and the concepts that are necessary to understand the process. Pretax financial income is a financial reporting term, while taxable income is a tax accounting term. There are two types of differences that can occur from differences between pretax financial income and taxable income. Temporary differences include deferred tax liabilities and deferred tax assets. Permanent differences result from a company having tax-free income, non-deductible expenses, or allowable deductions in excess of cost, which leads to an effective tax rate that differs from its statutory (regular) tax rate.

CONCEPTUAL QUESTIONS

a. Describe what is meant by the term book income? Which number in ZAGG's statement of operation captures this notion for fiscal 2012? Describe how a company's book income differs from its taxable income.

Book income (financial income) is usually a term used by individuals or businesses, while taxable income is generally used by the government, specifically any local, state, or federal taxing agency. Book income is shown on the income statement, it is also known as pretax income after taking revenues and deducting expenses. The amount is computed according to GAAP. It is measured with the objective of providing useful information to investors and creditors. In ZAGG's financial statements, the equivalent of book income is called "Income before provision for income taxes" with an amount of $24,898.

b. In your own words, define the following terms:

1. Permanent tax differences (also provide an example)

Permanent tax differences result from items that either enter into pretax financial income but never into taxable income or enter into taxable income but never into pretax financial income. Permanent differences affect only the period in which they occur. Therefore, companies do not recognize any deferred tax consequences. An example of a permanent tax difference are proceeds from life insurance carried by the company on employees.

2. Temporary tax difference (also provide an example)

A temporary tax difference is the difference between the tax basis of an asset or liability and its report (carrying or book) amount in the financial statements, which will result in taxable amounts or deductible amounts in future years. Taxable amounts increase taxable income in future years. Deductible amounts decrease taxable income in future years. An example of a temporary tax difference is depreciation on the tax return that is greater than the depreciation on the income statement.

3. Statutory tax rate

A statutory tax rate is a rate that is imposed by the law. Income tax can have multiple statutory rates for different income levels.

4. Effective tax rate

An effective tax rate is the percentage of our income we actually pay in taxes. This amount can be found by dividing tax expense by pretax financial income (book income).

c. Explain in general terms why a company reports deferred income taxes as part of their total income tax expense. Why don't companies simply report their current tax bill as their income tax expense?

According to the ASC 740, the total income tax expense (or benefit) for the year is the sum of deferred tax expense (or benefit) and income taxes currently payable or refundable. The current and deferred tax amounts are computed separately, and the sum

of the two equals the total provision. Both current and deferred tax liabilities and assets are based on the provisions of the enacted tax law. The amount of income tax expense is usually calculated through GAAP. This amount is on the income statement and is usually the last expense line item before net income. This is the actual amount of taxes that are owed. Tax is the total income tax expense, including the provision for income taxes both currently payable and deferred. These two items are computed separately because GAAP and IRS tax code treat them differently and they are then combined into total income expense.

d. Explain what deferred income tax assets and deferred income tax liabilities represent. Give an example of a situation that would give rise to each of these items on the balance sheet.

According to the ASC 740, a temporary difference is created when an item has been treated differently for financial reporting purposes and for tax purposes in the same period, and when it is expected to reverse in a future period and create a tax consequence. A deferred tax liability represents the increase in taxes payable in future years as a result of taxable temporary differences existing at the end of the current year. An example of a deferred tax liability would be when depreciation on the tax return is greater than depreciation on the income statement. This would be a deferred tax liability because it leads to a future taxable amount.

A deferred tax asset represents the increase in taxes refundable (or saved) in future years as a result of deductible temporary differences existing at the end of the current year. An example of a deferred tax asset would be when rent collected on the tax return is greater

than the rent recognized on the income statement. This would be a deferred tax asset because it leads to a future deductible amount.

e. Explain what a deferred income tax valuation allowance is and when it should be recorded.

Companies recognize a deferred tax asset for all deductible temporary differences. However, a company should use a valuation allowance to reduce a deferred tax asset only if it is more than likely than not that it will not realize some portion or all of the deferred tax asset. A valuation allowance is the portion of a deferred tax asset for which it is more likely than not that a company will not realize a tax benefit. This valuation allowance account is in place to recognize a reduction in the carrying amount of the deferred tax asset on the balance sheet. The valuation allowance account is a contra account.

f. Consider the information disclosed in Note 8 – Income Taxes to answer the following questions:

1. Using information in the first table in Note 8, show the journal entry that ZAGG recorded for the income tax provision in fiscal 2012?

The amount of the income tax provision for fiscal 2012 can be found in the income statement under "Income tax provision". It also is found in Note 8 as the total provision for 2012. The amount is $9,393. The next part of this journal entry is the deferred tax assets, net, which is found right above this total with an amount of $8,293. These two amounts added together equal $17,686, which is the amount of income tax payable.

Income Tax Expense	9,393	
Deferred Tax Asset, Net	8,293	
Income Tax Payable		17,686

[In Thousands]

2. Using the information in the third table in Note 8, decompose the amount of "net deferred income taxes" recorded in income tax journal entry in part *f. i.* into its deferred income tax asset and deferred income tax liability components.

The amounts of both income tax expense and income tax payable stay the same at $9,393 and $17,686. It is just the amount of deferred tax asset, net, in the entry above that is split up into its deferred income tax asset and deferred income tax

liability components. In this case, the deferred tax liability is reversing from a previous period.

Income Tax Expense	9,393	
Deferred Tax Asset	8,002	
Deferred Tax Liability	291	
Income Tax Payable		17,686

[In Thousands]

3. The second table in Note 8 provides a reconciliation of income taxes computed using the federal statutory rate (35%) to income taxes computed using ZAGG's effective tax rate. Calculate ZAGG's 2012 effective tax rate using the information provided in their income statement. What accounts for the difference between the statutory rate and ZAGG's effective tax rate?

The equation for the effective tax rate is Income tax expense divided by pretax income (book income). The pretax income amount is found on the income statement under "Income before provision for income taxes". The difference between the statutory rate and ZAGG's effective tax rate are due to the permanent differences between the book income and the taxable income.

$$\$9{,}393 \div \$23{,}898 = \$39.3\%$$

4. According to the third table in Note 8 – Income Taxes, ZAGG had a net deferred income tax asset balance of $13,508,000 at December 31, 2012. Explain where this amount appears on ZAGG's balance sheet.

In Note 8 under the deferred tax assets section, the total deferred tax assets are $14,302 and the valuation allowance is $713.

$$\$14{,}302 - \$713 = \$13{,}508$$

Although, on the balance sheet the amount of $13,508 is split into current and noncurrent amounts to total $13,508. The current asset amount is $6,912 under "deferred income tax assets". The noncurrent asset amount is $6,596 under "deferred income tax assets".

CONCLUSION

This case was set up to primarily understand all of the concepts before approaching any process questions. There are some possibly unfamiliar, new terms in this case that need to be understood before applying them.

First, book income (financial income) is shown on the company's financial statements that is computed according to GAAP, while taxable income is used by the government and associated with IRS.

Next, temporary differences include deferred tax liabilities and deferred tax assets. Deferred tax liabilities lead to future taxable amounts, while deferred tax assets lead to future deductible amounts. Permanent differences result from either items that enter into pretax financial income but never into taxable income or enter into taxable income but never into pretax financial income. Permanent differences result from a company having tax-free income, non-deductible expenses, or allowable deductions in excess of cost, which leads to an effective tax rate that differs from its statutory (regular) tax rate.

Temporary accounts include both deferred tax assets and deferred tax liabilities that are on the balance sheet. Deferred tax liabilities represent the increase in taxes payable in future years as a result of taxable temporary differences existing at the end of the current year. Deferred tax assets represent the increase in taxes refundable (or saved) in future years as a result of deductible temporary differences existing at the end of the current year.

The last important concept covered in this case, is a deferred income tax valuation allowance. A company should use a valuation allowance to reduce a deferred tax asset only if it is more than likely than not that it will not realize some portion or all of the deferred tax asset.

This case depends heavily on the notes to the financial statements. It is important to look for certain amounts within the balance sheet or income statement, but many of the amounts on these financial statements are net or not the exact current amount. In Note 8, many of these amounts are broken further down to find the specific number.

CASE 12
APPLE INC. – REVENUE RECOGNITION

Case #12 involves a company called Apple. Apple Inc. designs, manufactures, and markets personal computers, mobile communication devices, and portable digital music and video players and sells a variety of related software, services, peripherals, and networking solutions.

OPENING STATEMENT

The twelfth case primarily focuses on the revenue recognition principle. In order to understand the principle, you first have to understand the difference between revenues and gains, which are discussed below. This case was altered slightly to look at the new revenue recognition standard, which was issued on August 12, 2015 and should be applied to all financial statements by December 15, 2017.

Many parts of this case focus on the notes to the financial statements on revenue recognition. This section discusses exactly how Apple recognizes revenue. It also specifies the problems that can occur when revenue is deferred (from software updates, issued gift cards not redeemed, etc.). Accounting for revenue also gets more complex when there are multiple-element contracts and the revenue has to be allocated among the different elements.

CONCEPTUAL QUESTIONS

a. In your own words, define "revenues." Explain how revenues are different from "gains."

Revenue is one of the most important financial performance measures that a company reports. Revenue gives insight into a company's past and future performance. "Revenues" are inflows or other enhancements of assets of an entity or settlement of its liabilities during a period. This can be from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.

"Gains" are increases in net assets from peripheral or incidental transactions of an entity and everything else affecting the entity during a period except those that result from expenses or distributions to owners.

The process of revenue recognition principle begins when a company agrees to sell a product or service to a customer, which is called a performance obligation. Although, the revenue is not recognized until the company satisfies this performance obligation. Therefore, the revenue is recognized in the accounting period in which the performance obligation is satisfied.

b. Describe what it means for a business to "recognize" revenues. What specific accounts and financial statements are affected by the process of revenue recognition? Describe the revenue recognition criteria outlined in the FASB's Statement of Concepts No. 5.

The new revenue recognition standard adopts an asset-liability approach. The new standard recognizes, and measures revenue based on the changes in assets and liabilities. When a business "recognizes" revenue, goods or services are transferred to customers that needs to be accounted for in financial statements. The prior standard was the "earned and realized" criteria. Under the asset-liability approach, companies do not account for the revenue until an asset or liability arises from a contract with its customers. Contracts indicate the terms of the transaction, provide the measurement of the consideration, and specify the promises that must be met by each party. There are five steps that break down this process to ensure that it is measured correctly. The five steps include: Identify the contract with the customers, identify the separate performance obligations in the contract, determine the transaction price, allocate the transaction price to the separate performance obligations, and recognize revenue when each performance obligation is satisfied.

A couple of indicators that control has transferred from the business to the customer include: the company has a right to payment for the asset, the company has transferred legal title to the asset, the company has transferred physical possession of the asset, the customer has significant risks and rewards of ownership, and the customer has accepted the asset. Accounts Receivable would be debited (asset section of the balance sheet) and Sales Revenue would be credited (revenue section of the income statement) to recognize revenue.

In FASB's Statement of Concepts No. 5, the statement gives guidance on what information should be included in the financial statements and when. It states that recognition is complete when an item is fully incorporated into the financial statements of an entity.

c. Refer to the Revenue Recognition discussion in Note 1. In general, when does Apple recognize revenue? Explain Apple's four revenue recognition criteria. Do they appear to be aligned with the revenue recognition criteria you described in part b, above?

In general, Apple recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable. Persuasive evidence of an arrangement exists when Apple creates a contract with their customer. A contract is an agreement between two or more parties that creates enforceable rights or obligations. Revenue can only be recognized when a valid contract exists. On entering into a contract with a customer, a company obtains rights to receive consideration from the customer and assumes obligations to transfer goods or services to the customer. Delivery has occurred when the title and risk of loss have been transferred to the customer. The sales price is the amount of consideration that a company expects to receive from a customer in exchange for transferring goods and services. Lastly, the collection is probable, and revenue will be recognized once all of these prior criteria are met. Yes, the criteria Apple has stated in the notes about revenue recognition appear to be aligned with the revenue recognition I described in Part B above.

d. What are multiple-element contracts and why do they pose revenue recognition problems for companies?

Multiple-element contracts consist of one contract that has multiple goods or services to be delivered to the customer. For Apple this includes tangible products (i.e., iPhone, iPad,

Apple TV, Apple Watch, etc.) that include software that is essential to this product's functionality and undelivered software elements. Therefore, the company allocates revenue based on all items relative selling prices. For some of the devices, Apple has indicated that there might be future software upgrades for these products free of charge. This revenue is allocated based on the company's ESP. ESP is the best estimate of selling price. The revenue is deferred and recognized on a straight-line basis over the estimated period that the upgrade is expected to be provided. These contracts pose revenue recognition problems for companies because sometimes it is difficult to determine a price for these products or services to be recognized in the future and also can be difficult to determine when to recognize.

e. In general, what incentives do managers have to make self-serving revenue recognition choices?

Managers have incentives to recognize as much revenue as possible from the sales of their products. Although, they also have to match this revenue with the expenses throughout the period. Management has to make quite a few estimates throughout the period about possible deductions to this revenue. These estimates include expected future sales returns, customer incentive programs, etc. Sometimes it can be difficult for management to decide when to recognize these revenues on the financial statements.

f. Refer to Apple's revenue recognition footnote. In particular, when does the company recognize revenue for the following types of sales?

1. iTunes songs sold online.

"For certain sales made through the iTunes Store, the Company is not the primary obligor to users of the software, and third-party developers determine the selling price of their software. Therefore, the Company accounts for such sales on a net basis by recognizing only the commission it retains from each sale and including that commission in net sales in the Consolidated Statements of Operations." iTunes songs sold online prices are not determined by Apple, they are determined by the third-party developers. These songs should be recognized when they are sold, and the customer receives the song in their iTunes Library. Then, Apple should recognize their portion of this sale in their financial statements. Apple recognizes in accordance with general revenue recognition accounting guidance.

2. Mac-branded accessories such as headphones, power adapters, and backpacks sold in the Apple stores. What if the accessories are sold online?

"For online sales to individuals, the Company defers revenue until the customer receives the product because the Company legally retains a portion of the risk of loss on these sales during transit." Once the customer receives the product, Apple can recognize revenue in accordance with general revenue recognition accounting guidance. The only difference with online sales is that the product must be

delivered, rather than handing the product over to the customer in the store. When the products are sold in store, there is no loss liability because Apple has confirmation that the product has reached the customer's hands.

3. iPods sold to a third-party reseller in India.

This case would be similar to the products that are sold online because revenue will not be recognized until the products are delivered to the third-party reseller in India. They are not recognized until then because "…the Company legally retains a portion of the risk of loss on these sales during transit." When the products arrive, Apple will recognize revenue in accordance with general revenue recognition accounting guidance.

4. Revenue from gift cards

"The company sells gift cards and records deferred revenue upon the sale of the card, which is relieved upon redemption of the card by the customer." In this case, Apple sells a gift card to a customer, but Apple does not actually recognize revenue until the customer redeems this gift card. This revenue is deferred because Apple receives the payment in advance of the delivery of products or performance of services.

CONCLUSION

This case was different from many of the previous cases because it disregarded most of the information within this case, and instead, focused on the new revenue recognition standard in Apple's 10-k. This is helpful because as of the end of 2017, only the new standard will be available in financial statements. Therefore, it is extremely important to understand the changes.

Revenue is one of the most significant financial performance measures that a company reports in their financial statements. "Revenues" are inflows or other enhancements of assets of an entity or settlement of its liabilities during a period. This can be from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations.

The revenue recognition principle starts with a performance obligation. Once this performance obligation is satisfied and the product is delivered, or the service is complete, the revenue is recognized in this accounting period. The new revenue recognition standard adopts an asset-liability approach that recognizes, and measures revenue based on the changes in assets and liabilities.

Apple recognizes their revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable. Apple has multiple-element contracts that includes tangible products (iPhone, iPad, etc.), that consist of software that is essential to this product's functionality and undelivered software elements.

APPENDIX A

Figure A.1: Glenwood Heating, Inc. Transactions

Glenwood Heating, Inc. Part A and B: Recording Transactions							
	Assets						
Transactions	**Cash**	**Accounts Receivable**	**Allowance for Bad Debts**	**Inventory**	**Land**	**Building**	**Accumulated Depreciation - Building**
Transaction 1	$160,000						
Transaction 2	400,000						
Transaction 3	(420,000)				$70,000	$350,000	
Transaction 4	(80,000)						
Transaction 5				$239,800			
Transaction 6		$398,500					
Transaction 7	299,100	(299,100)					
Transaction 8	(213,360)						
Transaction 9	(41,000)						
Transaction 10	(34,200)						
Transaction 11	(23,200)						
Transaction 12							
A Balances	**$47,340**	**$99,400**	**$-**	**$239,800**	**$70,000**	**$350,000**	**$-**
B-1 Bad Debts			$994				
B-2 COGS				$(177,000)			
B-3 Depreciation							
Building							$10,000
Equipment							
B-4 Equipment							
Rental Payment	(16,000)						
B-5 Income Tax	(30,914)						
B Balances	**$426**	**$99,400**	**$994**	**$62,800**	**$70,000**	**$350,000**	**$10,000**

Figure A.1: Glenwood Heating, Inc. Transactions (Cont'd)

Glenwood Heating, Inc. Part A and B: Recording Transactions							
	Assets		**Liabilities**			**Stockholders' Equity**	
Transactions	**Equipment**	**Accumulated Depreciation - Equipment**	**Accounts Payable**	**Note Payable**	**Interest Payable**	**Common Stock**	**Interest Expense**
Transaction 1						$ 160,000	
Transaction 2				$ 400,000			
Transaction 3							
Transaction 4	$ 80,000						
Transaction 5			$ 239,800				
Transaction 6							
Transaction 7							
Transaction 8			(213,360)				
Transaction 9				(20,000)			$ 21,000
Transaction 10							
Transaction 11							
Transaction 12					$ 6,650		6,650
A Balances	**$ 80,000**	**$-**	**$ 26,440**	**$ 380,000**	**$ 6,650**	**$ 160,000**	**$ 27,650**
B-1 Bad Debts							
B-2 COGS							
B-3 Depreciation							
Building							
Equipment		$ 9,000					
B-4 Equipment							
Rental Payment							
B-5 Income Tax							
B Balances	**$ 80,000**	**$ 9,000**	**$ 26,440**	**$ 380,000**	**$ 6,650**	**$ 160,000**	**$ 27,650**

Figure A.1: Glenwood Heating, Inc. Transactions (Cont'd)

Glenwood Heating, Inc. Parts A and B: Recording Transactions								
	Stockholders' Equity							
Transactions	**Sales**	**Other Operating Expenses**	**Dividends**	**Cost of Goods Sold**	**Depreciation Expense - Building**	**Depreciation Expense - Equipment**	**Rent Expense**	**Bad Debt Expense**
Transaction 1								
Transaction 2								
Transaction 3								
Transaction 4								
Transaction 5								
Transaction 6	$ 398,500							
Transaction 7								
Transaction 8								
Transaction 9								
Transaction 10		$ 34,200						
Transaction 11			$ 23,200					
Transaction 12								
A Balances	**$ 398,500**	**$ 34,200**	**$ 23,200**	$-	$-	$-	$-	$-
B-1 Bad Debts								
B-2 COGS				$ 177,000				$ 994
B-3 Depreciation								
Building					$ 10,000			
Equipment						$ 9,000		
B-4 Equipment								
Rental Payment							$ 16,000	
B-5 Income Tax								
B Balances	**$ 398,500**	**$ 34,200**	**$ 23,200**	**$ 177,000**	**$ 10,000**	**$ 9,000**	**$ 16,000**	**$ 994**

Figure A.2: Eads Heaters, Inc. Transactions

Eads Heaters, Inc. Part A and B: Recording Transactions							
	Assets						
Transactions	**Cash**	**Accounts Receivable**	**Allowance for Bad Debts**	**Inventory**	**Land**	**Building**	**Accumulated Depreciation - Building**
Transaction 1	$ 160,000						
Transaction 2	400,000						
Transaction 3	(420,000)				$ 70,000	$ 350,000	
Transaction 4	(80,000)						
Transaction 5				$ 239,800			
Transaction 6		$ 398,500					
Transaction 7	299,100	(299,100)					
Transaction 8	(213,360)						
Transaction 9	(41,000)						
Transaction 10	(34,200)						
Transaction 11	(23,200)						
Transaction 12							
A Balances	**$ 47,340**	**$ 99,400**	**$-**	**$ 239,800**	**$ 70,000**	**$ 350,000**	**$-**
B-1 Bad Debts			$ 4,970				
B-2 COGS				$ (188,800)			
B-3 Depreciation							
Building							$ 10,000
Equipment							
B-4 Equipment							
Rental Payment	$ (16,000)						
B-5 Income Tax	(23,505)						
B Balances	**$ 7,835**	**$ 99,400**	**$ 4,970**	**$ 51,000**	**$ 70,000**	**$ 350,000**	**$ 10,000**

Figure A.2: Eads Heaters, Inc. Transactions (Cont'd)

Eads Heaters, Inc. Parts A and B: Recording Transactions							
	Assets				**Liabilities**		
Transactions	**Equipment**	**Accumulated Depreciation - Equipment**	**Leased Equipment**	**Accumulated Depreciation - Lease**	**Accounts Payable**	**Note Payable**	**Interest Payable**
Transaction 1							
Transaction 2						$400,000	
Transaction 3							
Transaction 4	$ 80,000						
Transaction 5					$239,800		
Transaction 6							
Transaction 7							
Transaction 8					(213,360)		
Transaction 9						(20,000)	
Transaction 10							
Transaction 11							
Transaction 12							$ 6,650
A Balances	**$ 80,000**	**$-**	**$-**	**$-**	**$ 26,440**	**$380,000**	**$ 6,650**
B-1 Bad Debts							
B-2 COGS							
B-3 Depreciation							
Building							
Equipment		$ 20,000					
B-4 Equipment			$ 92,000				
Rental Payment				$ 11,500			
B-5 Income Tax							
B Balances	**$ 80,000**	**$ 20,000**	**$ 92,000**	**$ 11,500**	**$ 26,440**	**$380,000**	**$ 6,650**

Figure A.2: Eads Heaters, Inc. Transactions (Cont'd)

Eads Heaters, Inc. Parts A and B: Recording Transactions						
	Stockholders' Equity					
Transactions	**Lease Payable**	**Common Stock**	**Interest Expense**	**Sales**	**Other Operating Expenses**	**Dividends**
Transaction 1		$ 160,000				
Transaction 2						
Transaction 3						
Transaction 4						
Transaction 5						
Transaction 6				$ 398,500		
Transaction 7						
Transaction 8						
Transaction 9			$ 21,000			
Transaction 10					$ 34,200	
Transaction 11						$ 23,200
Transaction 12			6,650			
A Balances	**$-**	**$ 160,000**	**$ 27,650**	**$ 398,500**	**$ 34,200**	**$ 23,200**
B-1 Bad Debts						
B-2 COGS						
B-3 Depreciation						
Building						
Equipment						
B-4 Equipment	$ 92,000					
Rental Payment	(8,640)		$ 7,360			
B-5 Income Tax						
B Balances	**$ 83,360**	**$ 160,000**	**$ 35,010**	**$ 398,500**	**$ 34,200**	**$ 23,200**

Figure A.3: Glenwood Heating, Inc. Trial Balance (Part A)

Glenwood Heating, Inc. Trial Balance - Part A		
Accounts	**Debits**	**Credits**
Cash	$ 47,340	
Accounts Receivable	99,400	
Inventory	239,800	
Land	70,000	
Building	350,000	
Equipment	80,000	
Accounts Payable		$ 26,440
Notes Payable		380,000
Interest Payable		6,650
Common Stock		160,000
Dividend	23,200	
Sales		398,500
Other Operating Expenses	34,200	
Interest Expense	27,650	
Total	**$ 971,590**	**$ 971,590**

Figure A.4: Glenwood Heating, Inc. Trial Balance (Part B)

Glenwood Heating, Inc. Trial Balance - Part B		
Accounts	**Debits**	**Credits**
Cash	$ 426	
Accounts Receivable	99,400	
Allowance for bad debts		$ 994
Inventory	62,800	
Land	70,000	
Building	350,000	
Accumulated Depreciation - building		10,000
Equipment	80,000	
Accumulated Depreciation - equipment		9,000
Accounts payable		26,440
Interest payable		6,650
Note payable		380,000
Common stock		160,000
Dividend	23,200	
Sales		398,500
Cost of goods sold	177,000	
Other operating expenses	34,200	
Bad debt expense	994	
Depreciation expense - building	10,000	
Depreciation expense - equipment	9,000	
Rent expense	16,000	
Interest expense	27,650	
Provision for income tax	30,914	
Totals	**$ 991,584**	**$ 991,584**

Figure A.5: Eads Heaters, Inc. Trial Balance (Part A)

Eads Heaters, Inc. Trial Balance - Part A		
Accounts	**Debits**	**Credits**
Cash	$ 47,340	
Accounts Receivable	99,400	
Inventory	239,800	
Land	70,000	
Building	350,000	
Equipment	80,000	
Accounts Payable		$ 26,440
Notes Payable		380,000
Interest Payable		6,650
Common Stock		160,000
Dividend	23,200	
Sales		398,500
Other Operating Expenses	34,200	
Interest Expense	27,650	
Total	**$ 971,590**	**$ 971,590**

Figure A.6: Eads Heaters, Inc. Trial Balance (Part B)

Eads Heaters, Inc. Trial Balance - Part B		
Accounts	**Debits**	**Credits**
Cash	$ 7,835	
Accounts Receivable	99,400	
Allowance for bad debts		$ 4,970
Inventory	51,000	
Land	70,000	
Building	350,000	
Accumulated Depreciation - building		10,000
Equipment	80,000	
Accumulated Depreciation - equipment		20,000
Leased Equipment	92,000	
Accumulated Depreciation - leased equipment		11,500
Accounts payable		26,440
Interest payable		6,650
Note payable		380,000
Lease payable		83,360
Common stock		160,000
Dividend	23,200	
Sales		398,500
Cost of goods sold	188,800	
Other operating expenses	34,200	
Bad debt expense	4,970	
Depreciation expense - building	10,000	
Depreciation expense - equipment	20,000	
Depreciation expense - leased equipment	11,500	
Interest expense	35,010	
Provision for income tax	23,505	
Totals	**$1,101,420**	**$1,101,420**

APPENDIX B
WORKS CITED TO CASE 7

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